

AP - 65

# ANNUAL MONITORING REPORT

YEAR(S):  
2007



CERTIFIED MAIL  
RETURN RECEIPT NO. 7099 3400 0017 1737 2534

March 20, 2008

Mr. Edward Hansen  
New Mexico Energy, Minerals, & Natural Resources  
Oil Conservation Division, Environmental Bureau  
1220 S. St. Francis Drive  
Santa Fe, New Mexico 87504

RECEIVED  
2008 MAR 28 PM 1 49

RE: **2007 ANNUAL GROUNDWATER MONITORING REPORT  
EME M-9 SWD FACILITY (AP-65)  
T20S, R37E, SECTION 9, UNIT LETTER M  
LEA COUNTY, NEW MEXICO**

Mr. Hansen:

On behalf of Rice Operating Company (ROC), Trident Environmental takes this opportunity to submit the 2007 Annual Groundwater Monitoring Report for the EME M-9 SWD Site located in the Eunice-Monument-Eumont (EME) Salt Water Disposal (SWD) System.

ROC is the service provider (agent) for the EME SWD System and has no ownership of any portion of pipeline, well, or facility. The EME SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, please contact me at (432) 638-8740 or Kristin Pope at (505) 393-9174.

Sincerely,



Gilbert J. Van Deventer, PG, REM

cc: KFP, JSC

enclosures: maps, table, graphs, laboratory analytical reports, and well sampling data forms

## ATTACHMENT A

Site Maps

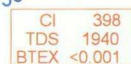
Table

Graphs

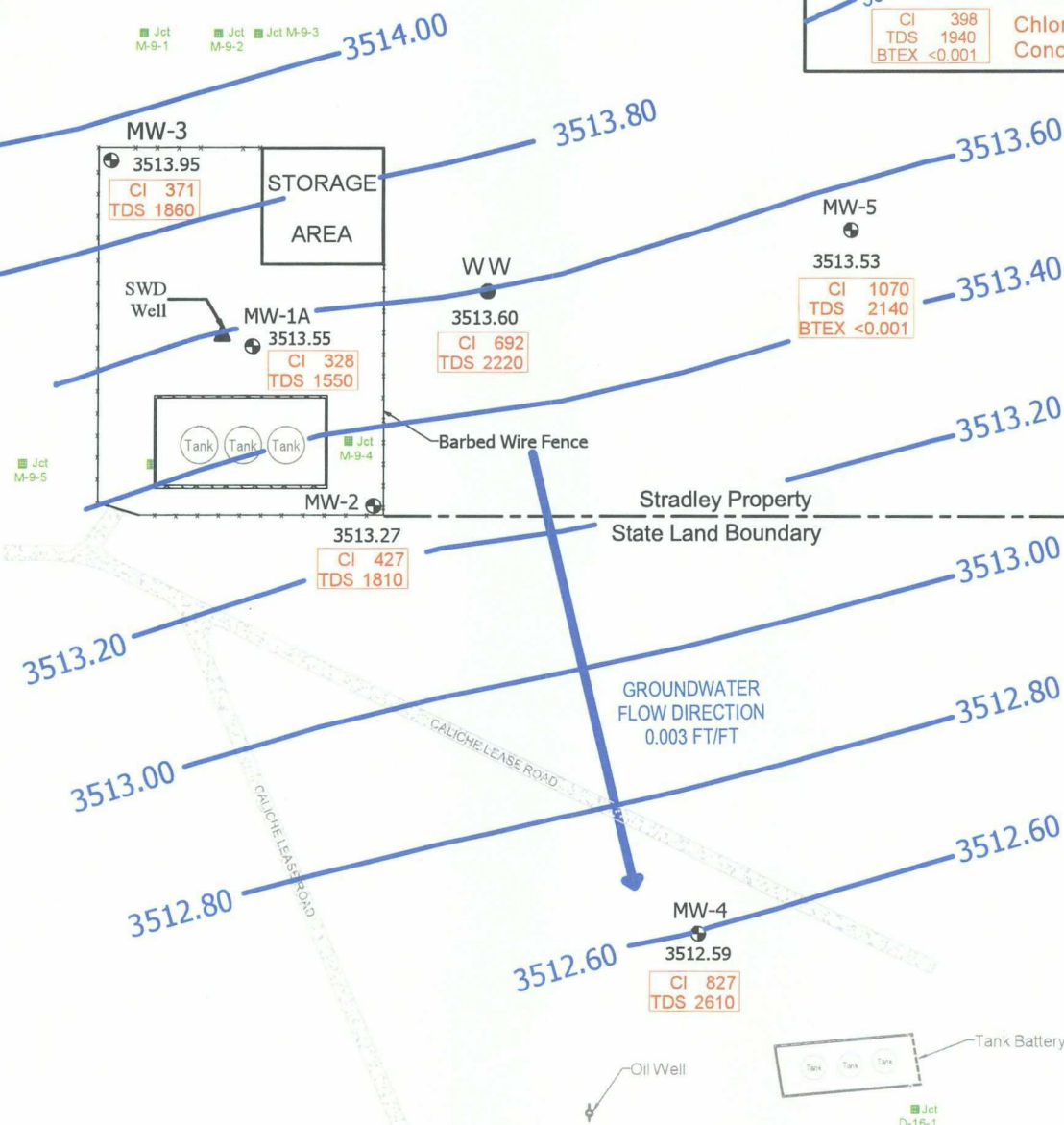
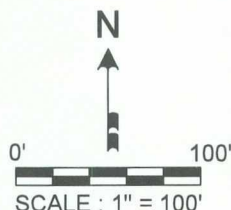
# MAP LEGEND

-  MW-3 3513.94 Monitoring Well  
Water Table Elevation (Ft AMSL)
-  WW Abandoned Water Well

 3513.00 Groundwater Elevation Contour  
(Contour Interval = 0.20 feet)

 CI 398  
TDS 1940  
BTEX <0.001 Chloride, TDS, and BTEX  
Concentrations in mg/L

Monument, NM is 3 miles north



EME M-9 SWD SITE

T20S-R37E-Section 9 - Unit M

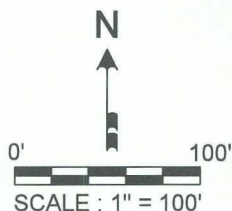
**RICE** Operating Company

GROUNDWATER GRADIENT AND  
CHLORIDE, TDS, & BTEX  
CONCENTRATION MAP

MARCH 5, 2007

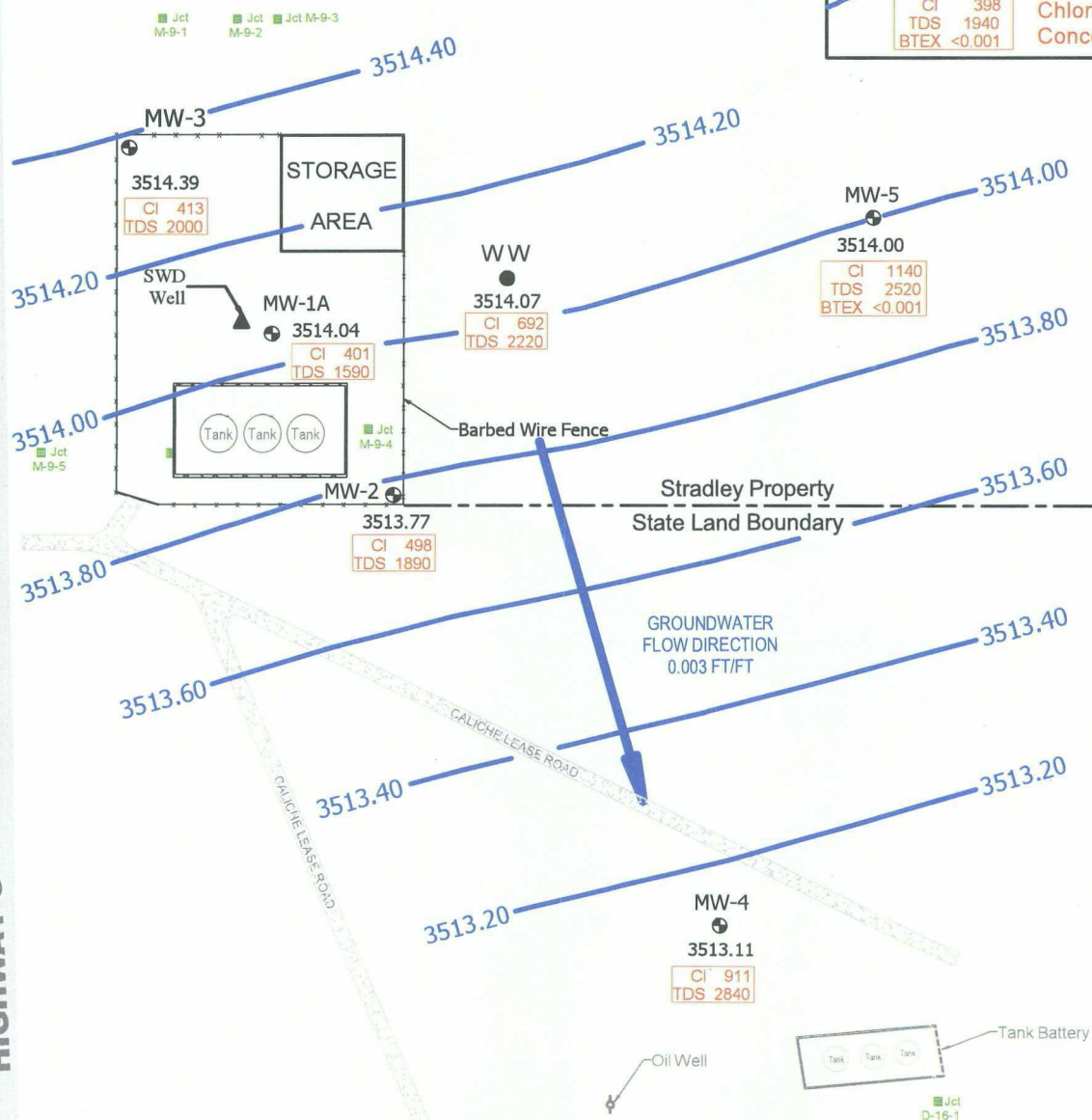
Monument, NM is 3 miles north

HIGHWAY 8



## MAP LEGEND

- MW-3  
3513.94  
Monitoring Well  
Water Table Elevation (Ft AMSL)
- WW  
Abandoned Water Well



EME M-9 SWD SITE

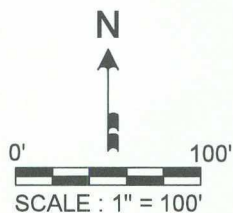
T20S-R37E-Section 9 - Unit M

**RICE** Operating Company

GROUNDWATER GRADIENT AND  
CHLORIDE, TDS, & BTEX  
CONCENTRATION MAP

JUNE 1, 2007

Monument, NM is 3 miles north



## MAP LEGEND

MW-3  
3513.94

Monitoring Well  
Water Table Elevation (Ft AMSL)

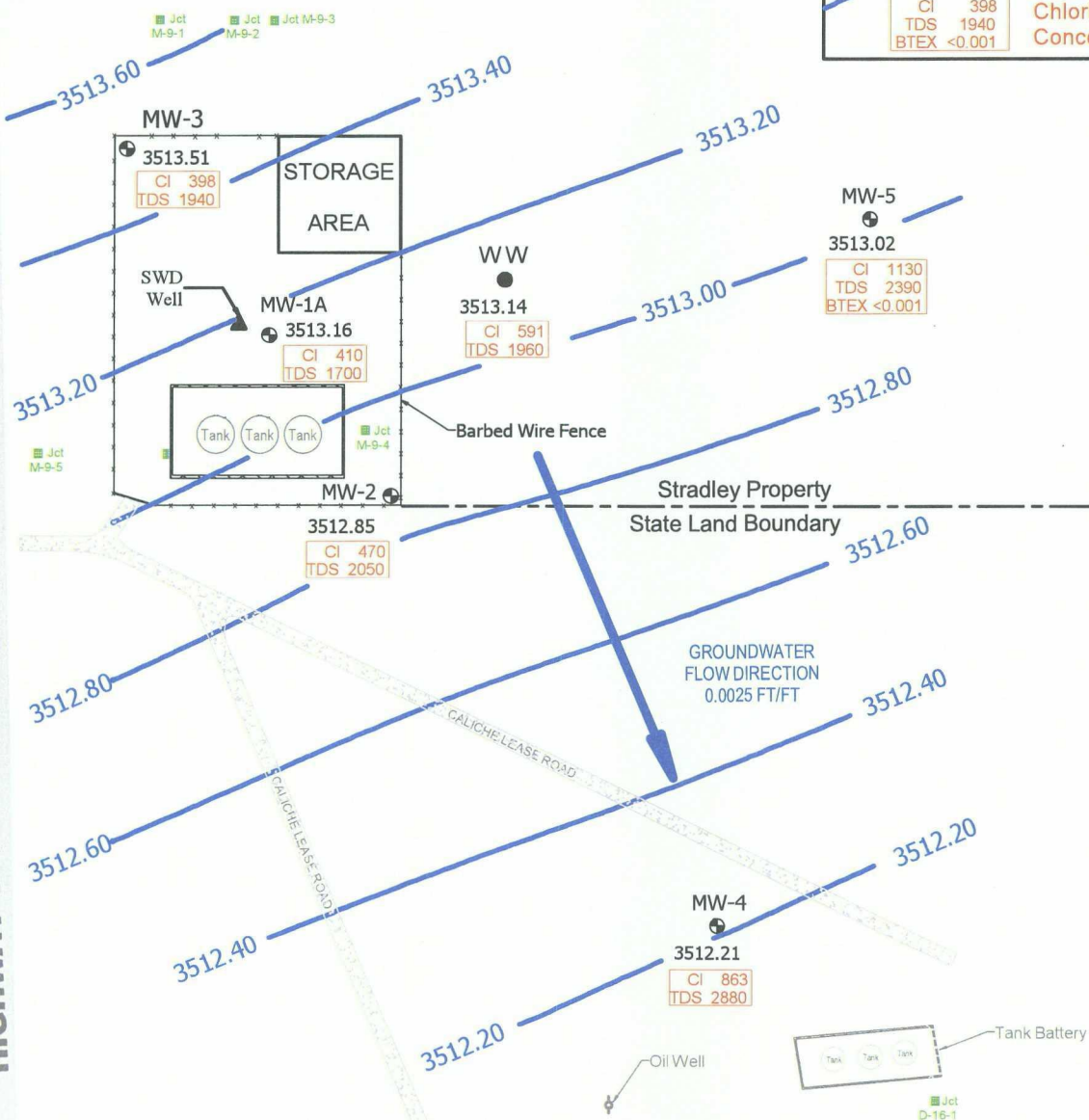
WW

Abandoned Water Well

3513.00  
Groundwater Elevation Contour  
(Contour Interval = 0.20 feet)

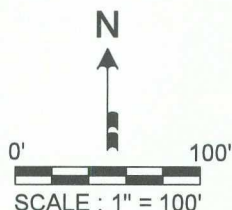
CI 398  
TDS 1940  
BTEX <0.001

Chloride, TDS, and BTEX  
Concentrations in mg/L



Monument, NM is 3 miles north

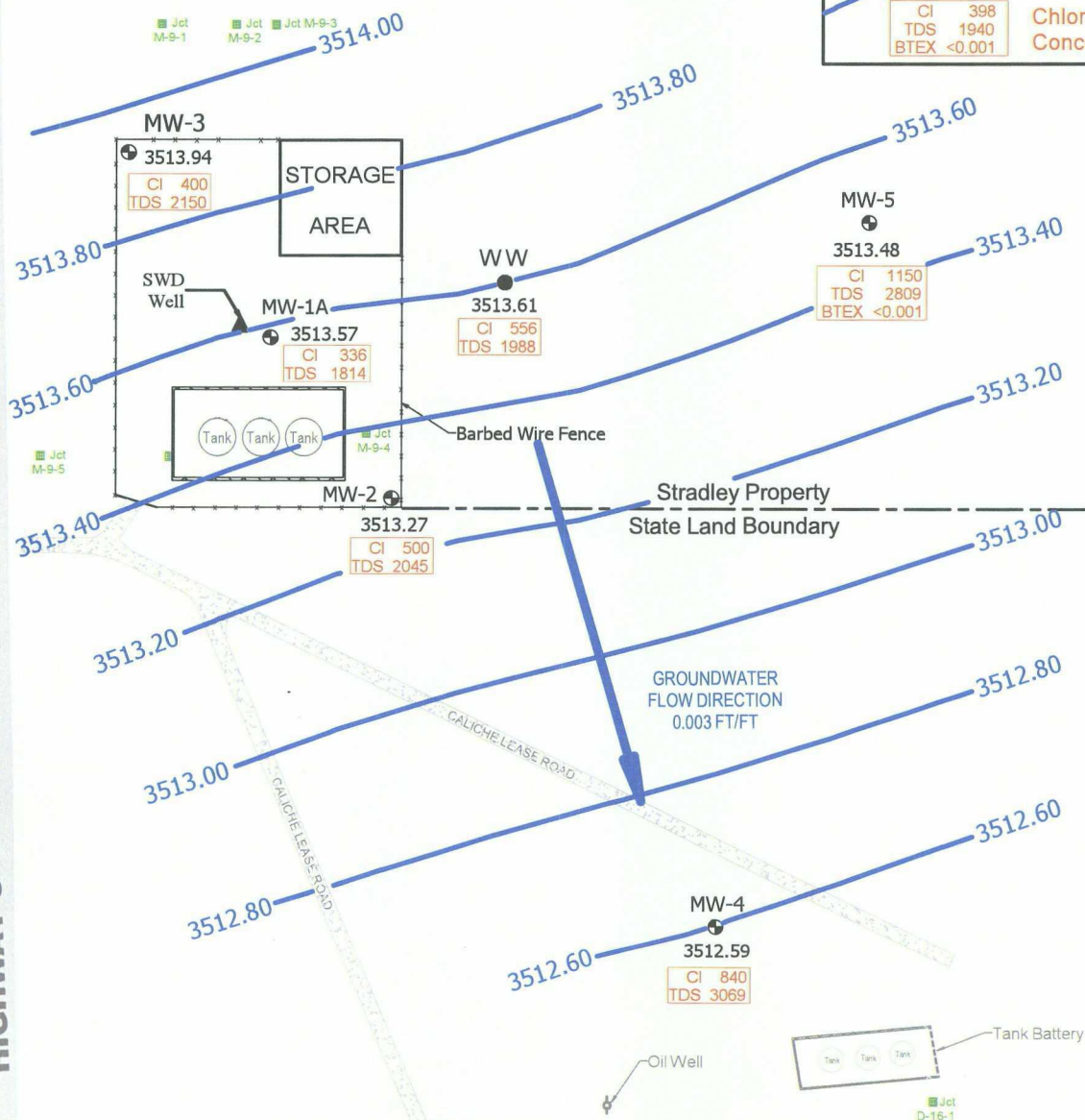
HIGHWAY 8



## MAP LEGEND



Monitoring Well  
Water Table Elevation (Ft AMSL)  
Abandoned Water Well



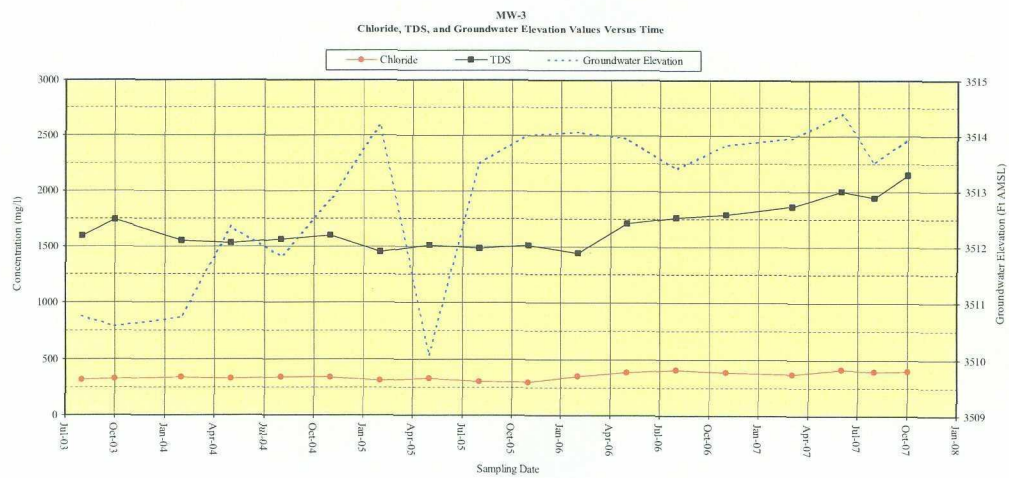
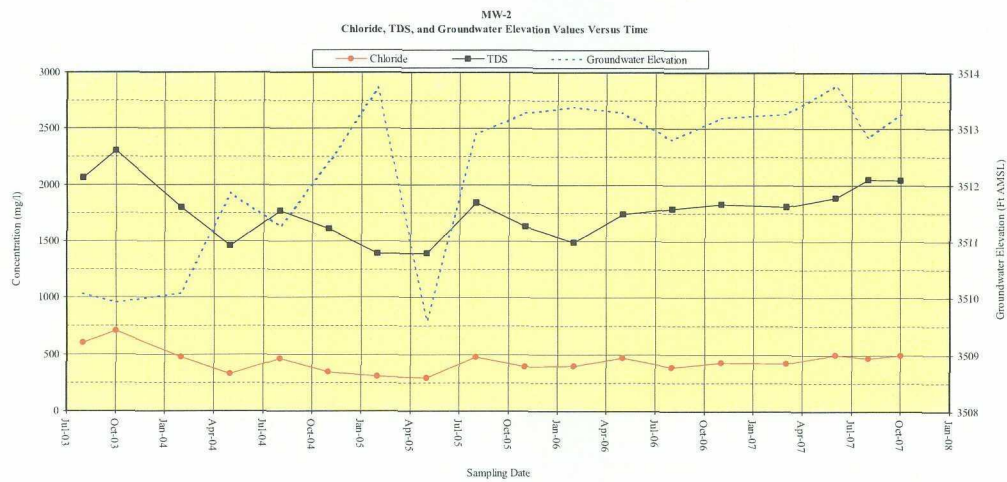
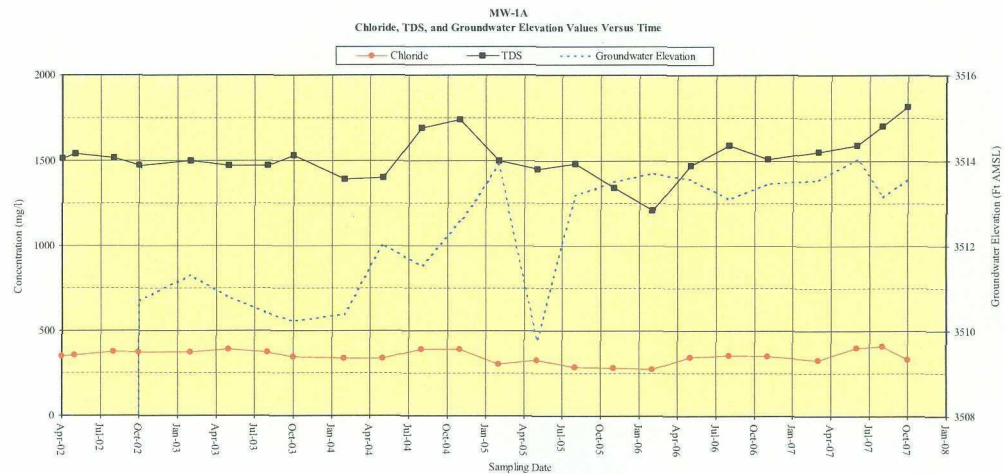
EME M-9 SWD SITE

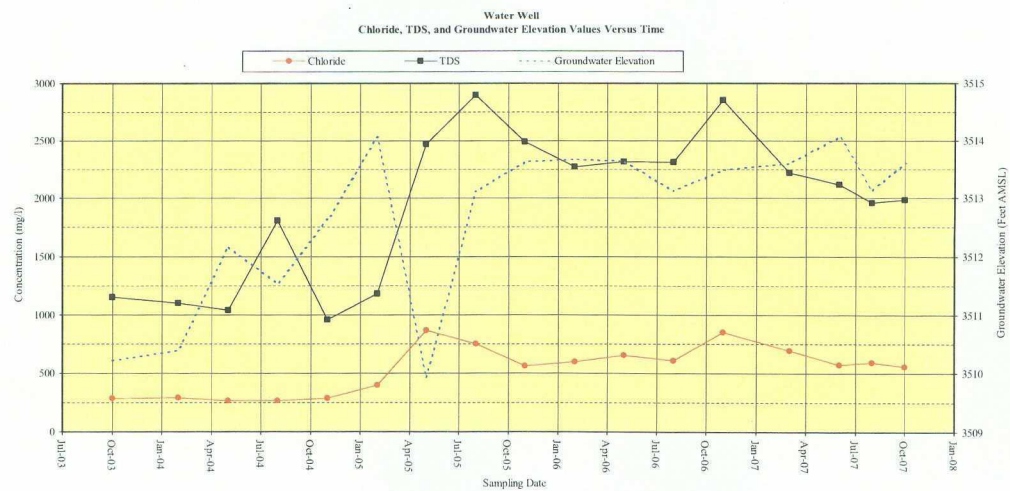
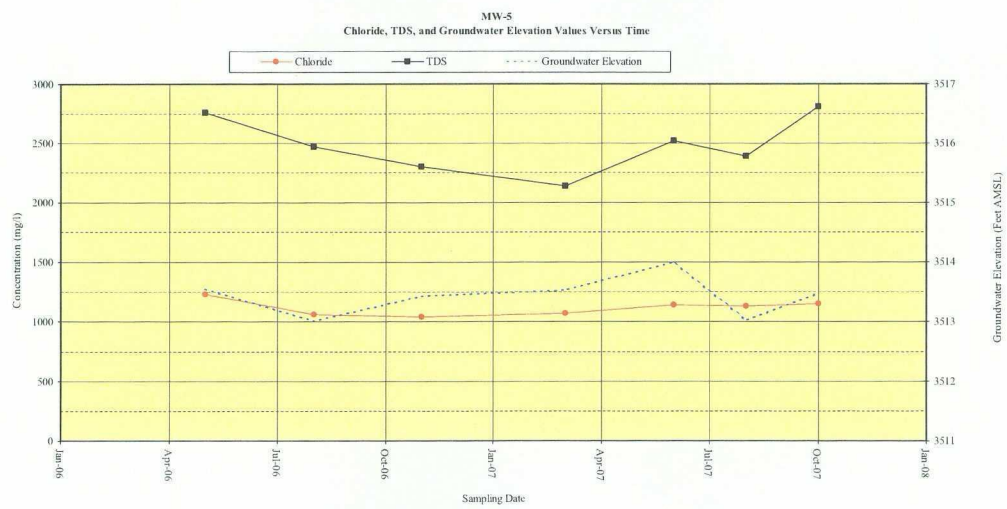
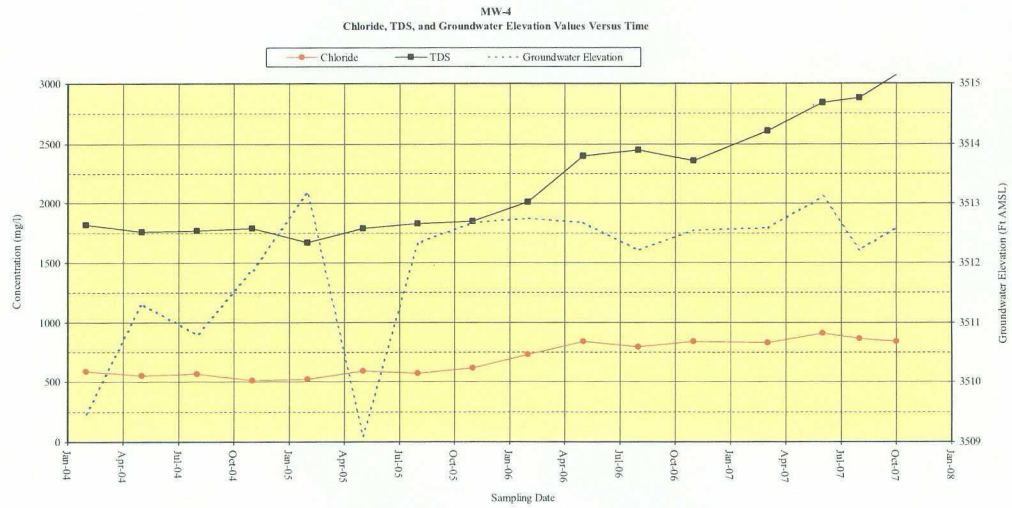
T20S-R37E-Section 9 - Unit M

**RICE** Operating Company

GROUNDWATER GRADIENT AND  
CHLORIDE, TDS, & BTEX  
CONCENTRATION MAP

OCTOBER 22, 2007





2007 Groundwater Monitoring Report  
EME M-9 SWD Facility (AP-65)

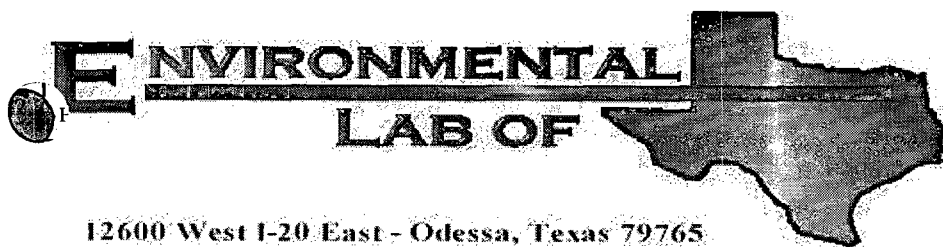
**Table 1 (Continued)**  
**Summary of Groundwater Sampling Results**

| Monitoring Well | Sample Date | Depth to Groundwater (feet BTOC) | Groundwater Elevation (feet AMSL) | Chloride (mg/L) | TDS (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylene (mg/L) |
|-----------------|-------------|----------------------------------|-----------------------------------|-----------------|------------|----------------|----------------|---------------------|---------------|
| MW-3            | 11/29/05    | 18.43                            | 3514.01                           | 296             | 1510       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/14/06    | 18.38                            | 3514.06                           | 349             | 1440       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/15/06    | 18.50                            | 3513.94                           | 388             | 1710       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/30/06    | 19.04                            | 3513.40                           | 407             | 1760       | ---            | ---            | ---                 | ---           |
|                 | 11/29/06    | 18.61                            | 3513.83                           | 387             | 1790       | ---            | ---            | ---                 | ---           |
|                 | 03/05/07    | 18.49                            | 3513.95                           | 371             | 1860       | ---            | ---            | ---                 | ---           |
|                 | 06/01/07    | 18.05                            | 3514.39                           | 413             | 2000       | ---            | ---            | ---                 | ---           |
|                 | 08/09/07    | 18.93                            | 3513.51                           | 398             | 1940       | ---            | ---            | ---                 | ---           |
|                 | 10/22/07    | 18.50                            | 3513.94                           | 400             | 2150       | ---            | ---            | ---                 | ---           |
| MW-4            | 02/20/04    | 22.61                            | 3509.47                           | 585             | 1820       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/05/04    | 20.77                            | 3511.31                           | 549             | 1760       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/04    | 21.28                            | 3510.80                           | 567             | 1770       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/10/04    | 20.21                            | 3511.87                           | 514             | 1790       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/08/05    | 18.90                            | 3513.18                           | 520             | 1670       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/02/05    | 22.99                            | 3509.09                           | 591             | 1790       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/05    | 19.75                            | 3512.33                           | 571             | 1830       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/29/05    | 19.40                            | 3512.68                           | 614             | 1850       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/14/06    | 19.33                            | 3512.75                           | 729             | 2010       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/15/06    | 19.40                            | 3512.68                           | 837             | 2400       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/30/06    | 19.87                            | 3512.21                           | 793             | 2450       | ---            | ---            | ---                 | ---           |
|                 | 11/29/06    | 19.53                            | 3512.55                           | 838             | 2360       | ---            | ---            | ---                 | ---           |
|                 | 03/05/07    | 19.49                            | 3512.59                           | 827             | 2610       | ---            | ---            | ---                 | ---           |
|                 | 06/01/07    | 18.97                            | 3513.11                           | 911             | 2840       | ---            | ---            | ---                 | ---           |
|                 | 08/09/07    | 19.87                            | 3512.21                           | 863             | 2880       | ---            | ---            | ---                 | ---           |
|                 | 10/22/07    | 19.49                            | 3512.59                           | 840             | 3069       | ---            | ---            | ---                 | ---           |
| MW-5            | 05/15/06    | 21.10                            | 3513.55                           | 1230            | 2760       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/30/06    | 21.64                            | 3513.01                           | 1060            | 2470       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/29/06    | 21.22                            | 3513.43                           | 1040            | 2300       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 03/05/07    | 21.12                            | 3513.53                           | 1070            | 2140       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 06/01/07    | 20.65                            | 3514.00                           | 1140            | 2520       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/09/07    | 21.63                            | 3513.02                           | 1130            | 2390       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 10/22/07    | 21.17                            | 3513.48                           | 1150            | 2809       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
| WW              | 08/22/03    | 21.09                            | 3509.37                           | ---             | ---        | ---            | ---            | ---                 | ---           |
|                 | 10/30/03    | 20.25                            | 3510.21                           | 284             | 1150       | < 0.001        | < 0.001        | < 0.001             | 0.002         |
|                 | 02/20/04    | 20.07                            | 3510.39                           | 292             | 1100       | < 0.001        | < 0.001        | < 0.001             | 0.002         |
|                 | 05/14/04    | 18.29                            | 3512.17                           | 266             | 1040       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/04    | 18.92                            | 3511.54                           | 266             | 1810       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/10/04    | 17.82                            | 3512.64                           | 284             | 959        | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/08/05    | 16.41                            | 3514.05                           | 395             | 1180       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/02/05    | 20.54                            | 3509.92                           | 866             | 2470       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/05    | 18.11                            | 3513.12                           | 751             | 2900       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/29/05    | 17.60                            | 3513.63                           | 558             | 2490       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/14/06    | 17.55                            | 3513.68                           | 594             | 2270       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/15/06    | 17.58                            | 3513.65                           | 651             | 2320       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/30/06    | 18.10                            | 3513.13                           | 605             | 2310       | ---            | ---            | ---                 | ---           |
|                 | 11/29/06    | 17.74                            | 3513.49                           | 853             | 2850       | ---            | ---            | ---                 | ---           |
|                 | 03/05/07    | 17.63                            | 3513.60                           | 692             | 2220       | ---            | ---            | ---                 | ---           |
|                 | 06/01/07    | 17.16                            | 3514.07                           | 568             | 2120       | ---            | ---            | ---                 | ---           |
|                 | 08/09/07    | 18.09                            | 3513.14                           | 591             | 1960       | ---            | ---            | ---                 | ---           |
|                 | 10/22/07    | 17.62                            | 3513.61                           | 556             | 1988       | ---            | ---            | ---                 | ---           |
| WQCC Standards  |             |                                  |                                   | 250             | 1000       | 0.01           | 0.75           | 0.75                | 0.62          |

2007 Groundwater Monitoring Report  
EME M-9 SWD Facility (AP-65)

**Table 1**  
**Summary of Groundwater Sampling Results**

| Monitoring Well | Sample Date | Depth to Groundwater (feet BTOC) | Groundwater Elevation (feet AMSL) | Chloride (mg/L) | TDS (mg/L) | Benzene (mg/L) | Toluene (mg/L) | Ethylbenzene (mg/L) | Xylene (mg/L) |
|-----------------|-------------|----------------------------------|-----------------------------------|-----------------|------------|----------------|----------------|---------------------|---------------|
| MW-1            | 04/08/02    | ---                              | ---                               | 348             | 1512       | < 0.002        | < 0.002        | < 0.002             | < 0.006       |
|                 | 05/13/02    | 21.02                            | ---                               | 354             | 1540       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/20/02    | 22.45                            | ---                               | 376             | 1517       | < 0.002        | < 0.002        | < 0.002             | < 0.006       |
| MW-1A           | 10/28/02    | 19.10                            | 3510.69                           | 372             | 1470       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/28/03    | 18.48                            | 3511.31                           | 372             | 1500       | 0.002          | 0.002          | 0.002               | 0.003         |
|                 | 05/16/03    | 19.00                            | 3510.79                           | 390             | 1470       | 0.001          | < 0.001        | < 0.001             | 0.001         |
|                 | 08/22/03    | 19.38                            | 3510.41                           | 372             | 1470       | 0.002          | < 0.001        | < 0.001             | < 0.001       |
|                 | 10/30/03    | 19.57                            | 3510.22                           | 346             | 1530       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/20/04    | 19.41                            | 3510.38                           | 337             | 1390       | 0.001          | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/05/04    | 17.76                            | 3512.03                           | 337             | 1400       | 0.001          | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/04    | 18.27                            | 3511.52                           | 390             | 1690       | 0.003          | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/10/04    | 17.23                            | 3512.56                           | 390             | 1740       | 0.003          | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/08/05    | 15.90                            | 3513.89                           | 304             | 1500       | 0.003          | < 0.001        | < 0.001             | 0.001         |
|                 | 05/02/05    | 20.03                            | 3509.76                           | 329             | 1450       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/05    | 16.61                            | 3513.18                           | 286             | 1480       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/29/05    | 16.28                            | 3513.51                           | 283             | 1340       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/14/06    | 16.09                            | 3513.70                           | 277             | 1210       | 0.002          | 0.002          | 0.003               | 0.006         |
|                 | 05/15/06    | 16.23                            | 3513.56                           | 344             | 1470       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/30/06    | 16.69                            | 3513.10                           | 355             | 1590       | ---            | ---            | ---                 | ---           |
|                 | 11/29/06    | 16.32                            | 3513.47                           | 351             | 1510       | ---            | ---            | ---                 | ---           |
|                 | 03/05/07    | 16.24                            | 3513.55                           | 328             | 1550       | ---            | ---            | ---                 | ---           |
|                 | 06/01/07    | 15.75                            | 3514.04                           | 401             | 1590       | ---            | ---            | ---                 | ---           |
|                 | 08/09/07    | 16.63                            | 3513.16                           | 410             | 1700       | ---            | ---            | ---                 | ---           |
|                 | 10/22/07    | 16.22                            | 3513.57                           | 336             | 1814       | ---            | ---            | ---                 | ---           |
| MW-2            | 08/22/03    | 21.45                            | 3510.07                           | 603             | 2060       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 10/30/03    | 21.61                            | 3509.91                           | 709             | 2300       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/20/04    | 21.44                            | 3510.08                           | 478             | 1800       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/05/04    | 19.67                            | 3511.85                           | 328             | 1460       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/04    | 20.26                            | 3511.26                           | 461             | 1770       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/10/04    | 19.13                            | 3512.39                           | 346             | 1610       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/08/05    | 17.80                            | 3513.72                           | 311             | 1390       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/02/05    | 21.94                            | 3509.58                           | 295             | 1390       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/05    | 18.62                            | 3512.90                           | 476             | 1840       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/29/05    | 18.24                            | 3513.28                           | 391             | 1630       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/14/06    | 18.14                            | 3513.38                           | 396             | 1490       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/15/06    | 18.23                            | 3513.29                           | 471             | 1740       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/30/06    | 18.72                            | 3512.80                           | 386             | 1790       | ---            | ---            | ---                 | ---           |
|                 | 11/29/06    | 18.33                            | 3513.19                           | 432             | 1830       | ---            | ---            | ---                 | ---           |
|                 | 03/05/07    | 18.25                            | 3513.27                           | 427             | 1810       | ---            | ---            | ---                 | ---           |
|                 | 06/01/07    | 17.75                            | 3513.77                           | 498             | 1890       | ---            | ---            | ---                 | ---           |
|                 | 08/09/07    | 18.67                            | 3512.85                           | 470             | 2050       | ---            | ---            | ---                 | ---           |
|                 | 10/22/07    | 18.25                            | 3513.27                           | 500             | 2045       | ---            | ---            | ---                 | ---           |
| MW-3            | 08/22/03    | 21.68                            | 3510.76                           | 319             | 1590       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 10/30/03    | 21.86                            | 3510.58                           | 328             | 1740       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/20/04    | 21.70                            | 3510.74                           | 337             | 1550       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/05/04    | 20.10                            | 3512.34                           | 328             | 1530       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/04    | 20.62                            | 3511.82                           | 337             | 1560       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 11/10/04    | 19.61                            | 3512.83                           | 337             | 1600       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 02/08/05    | 18.26                            | 3514.18                           | 312             | 1450       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 05/02/05    | 22.38                            | 3510.06                           | 329             | 1510       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |
|                 | 08/11/05    | 18.95                            | 3513.49                           | 300             | 1480       | < 0.001        | < 0.001        | < 0.001             | < 0.001       |



12600 West I-20 East - Odessa, Texas 79765

A Xenco Laboratories Company

## Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME M-9 SWD

Project Number: None Given

Location: T20S-R37E-Sec 9M- Lea County, NM

Lab Order Number: 7C09022

Report Date: 03/29/07

ATTACHMENT B

Laboratory Analytical Reports

And

Chain of Custody Documentation

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### ANALYTICAL REPORT FOR SAMPLES

| Sample ID        | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------------|---------------|--------|----------------|------------------|
| Monitor Well #1A | 7C09022-01    | Water  | 03/05/07 12:50 | 03-09-2007 14:21 |
| Monitor Well #2  | 7C09022-02    | Water  | 03/05/07 12:05 | 03-09-2007 14:21 |
| Monitor Well #3  | 7C09022-03    | Water  | 03/05/07 11:20 | 03-09-2007 14:21 |
| Monitor Well #4  | 7C09022-04    | Water  | 03/05/07 09:40 | 03-09-2007 14:21 |
| Monitor Well #5  | 7C09022-05    | Water  | 03/05/07 10:35 | 03-09-2007 14:21 |
| Water Well       | 7C09022-06    | Water  | 03/05/07 15:00 | 03-09-2007 14:21 |

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**Organics by GC**  
**Environmental Lab of Texas**

| Analyte                                   | Result | Reporting<br>Limit | Units  | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-------------------------------------------|--------|--------------------|--------|----------|---------|----------|----------|-----------|-------|
| <b>Monitor Well #5 (7C09022-05) Water</b> |        |                    |        |          |         |          |          |           |       |
| Benzene                                   | ND     | 0.00100            | mg/L   | 1        | EC71307 | 03/13/07 | 03/13/07 | EPA 8021B |       |
| Toluene                                   | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Ethylbenzene                              | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Xylene (p/m)                              | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Xylene (o)                                | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Surrogate: <i>a,a,a</i> -Trifluorotoluene |        | 87.8 %             | 80-120 |          | "       | "        | "        | "         |       |
| Surrogate: <i>4</i> -Bromofluorobenzene   |        | 89.0 %             | 80-120 |          | "       | "        | "        | "         |       |

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**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

| Analyte                                    | Result      | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method     | Notes |
|--------------------------------------------|-------------|--------------------|-------|----------|---------|----------|----------|------------|-------|
| <b>Monitor Well #1A (7C09022-01) Water</b> |             |                    |       |          |         |          |          |            |       |
| <b>Total Alkalinity</b>                    | <b>296</b>  | 2.00               | mg/L  | 1        | EC71305 | 03/13/07 | 03/13/07 | EPA 310.1M |       |
| <b>Chloride</b>                            | <b>328</b>  | 10.0               | "     | 20       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Total Dissolved Solids</b>              | <b>1550</b> | 10.0               | "     | 1        | EC71610 | 03/12/07 | 03/13/07 | EPA 160.1  | O-04  |
| <b>Sulfate</b>                             | <b>397</b>  | 10.0               | "     | 20       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Monitor Well #2 (7C09022-02) Water</b>  |             |                    |       |          |         |          |          |            |       |
| <b>Total Alkalinity</b>                    | <b>324</b>  | 2.00               | mg/L  | 1        | EC71305 | 03/13/07 | 03/13/07 | EPA 310.1M |       |
| <b>Chloride</b>                            | <b>427</b>  | 12.5               | "     | 25       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Total Dissolved Solids</b>              | <b>1810</b> | 10.0               | "     | 1        | EC71610 | 03/12/07 | 03/13/07 | EPA 160.1  | O-04  |
| <b>Sulfate</b>                             | <b>459</b>  | 12.5               | "     | 25       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Monitor Well #3 (7C09022-03) Water</b>  |             |                    |       |          |         |          |          |            |       |
| <b>Total Alkalinity</b>                    | <b>308</b>  | 2.00               | mg/L  | 1        | EC71305 | 03/13/07 | 03/13/07 | EPA 310.1M |       |
| <b>Chloride</b>                            | <b>371</b>  | 12.5               | "     | 25       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Total Dissolved Solids</b>              | <b>1860</b> | 10.0               | "     | 1        | EC71610 | 03/12/07 | 03/13/07 | EPA 160.1  | O-04  |
| <b>Sulfate</b>                             | <b>563</b>  | 12.5               | "     | 25       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Monitor Well #4 (7C09022-04) Water</b>  |             |                    |       |          |         |          |          |            |       |
| <b>Total Alkalinity</b>                    | <b>252</b>  | 2.00               | mg/L  | 1        | EC71305 | 03/13/07 | 03/13/07 | EPA 310.1M |       |
| <b>Chloride</b>                            | <b>827</b>  | 25.0               | "     | 50       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Total Dissolved Solids</b>              | <b>2610</b> | 10.0               | "     | 1        | EC71610 | 03/12/07 | 03/13/07 | EPA 160.1  | O-04  |
| <b>Sulfate</b>                             | <b>705</b>  | 25.0               | "     | 50       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Monitor Well #5 (7C09022-05) Water</b>  |             |                    |       |          |         |          |          |            |       |
| <b>Total Alkalinity</b>                    | <b>272</b>  | 2.00               | mg/L  | 1        | EC71305 | 03/13/07 | 03/13/07 | EPA 310.1M |       |
| <b>Chloride</b>                            | <b>1070</b> | 25.0               | "     | 50       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Total Dissolved Solids</b>              | <b>2140</b> | 10.0               | "     | 1        | EC71610 | 03/12/07 | 03/13/07 | EPA 160.1  | O-04  |
| <b>Sulfate</b>                             | <b>275</b>  | 25.0               | "     | 50       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Water Well (7C09022-06) Water</b>       |             |                    |       |          |         |          |          |            |       |
| <b>Total Alkalinity</b>                    | <b>268</b>  | 2.00               | mg/L  | 1        | EC71305 | 03/13/07 | 03/13/07 | EPA 310.1M |       |
| <b>Chloride</b>                            | <b>692</b>  | 25.0               | "     | 50       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |
| <b>Total Dissolved Solids</b>              | <b>2220</b> | 10.0               | "     | 1        | EC71610 | 03/12/07 | 03/13/07 | EPA 160.1  | O-04  |
| <b>Sulfate</b>                             | <b>679</b>  | 25.0               | "     | 50       | EC71615 | 03/14/07 | 03/14/07 | EPA 300.0  |       |

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

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**Total Metals by EPA / Standard Methods**  
**Environmental Lab of Texas**

| Analyte                                    | Result | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------------------------------------|--------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>Monitor Well #1A (7C09022-01) Water</b> |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 125    | 0.200              | mg/L  | 1        | EC72614 | 03/23/07 | 03/23/07 | EPA 6020A |       |
| Magnesium                                  | 71.3   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 8.45   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 247    | 0.500              | "     | "        | "       | "        | "        | "         |       |
| <b>Monitor Well #2 (7C09022-02) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 167    | 0.200              | mg/L  | 1        | EC72614 | 03/23/07 | 03/23/07 | EPA 6020A |       |
| Magnesium                                  | 70.7   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 9.78   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 354    | 0.500              | "     | "        | "       | "        | "        | "         |       |
| <b>Monitor Well #3 (7C09022-03) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 173    | 0.200              | mg/L  | 1        | EC72614 | 03/23/07 | 03/23/07 | EPA 6020A |       |
| Magnesium                                  | 68.2   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 5.67   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 379    | 0.500              | "     | "        | "       | "        | "        | "         |       |
| <b>Monitor Well #4 (7C09022-04) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 214    | 0.200              | mg/L  | 1        | EC72614 | 03/23/07 | 03/23/07 | EPA 6020A |       |
| Magnesium                                  | 117    | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 7.97   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 510    | 0.500              | "     | "        | "       | "        | "        | "         |       |
| <b>Monitor Well #5 (7C09022-05) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 187    | 0.200              | mg/L  | 1        | EC72614 | 03/23/07 | 03/23/07 | EPA 6020A |       |
| Magnesium                                  | 90.7   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 8.68   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 564    | 0.500              | "     | "        | "       | "        | "        | "         |       |
| <b>Water Well (7C09022-06) Water</b>       |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 137    | 0.200              | mg/L  | 1        | EC72614 | 03/23/07 | 03/23/07 | EPA 6020A |       |
| Magnesium                                  | 88.0   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 6.56   | 0.500              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 599    | 0.500              | "     | "        | "       | "        | "        | "         |       |

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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

| Analyte                                 | Result | Reporting<br>Limit | Units                                 | Spike<br>Level                        | Source<br>Result | %REC<br>Limits | RPD<br>Limit | Notes |
|-----------------------------------------|--------|--------------------|---------------------------------------|---------------------------------------|------------------|----------------|--------------|-------|
| <b>Batch EC71307 - EPA 5030C (GC)</b>   |        |                    |                                       |                                       |                  |                |              |       |
| <b>Blank (EC71307-BLK1)</b>             |        |                    | Prepared & Analyzed: 03/13/07         |                                       |                  |                |              |       |
| Benzene                                 | ND     | 0.00100            | mg/L                                  |                                       |                  |                |              |       |
| Toluene                                 | ND     | 0.00100            | "                                     |                                       |                  |                |              |       |
| Ethylbenzene                            | ND     | 0.00100            | "                                     |                                       |                  |                |              |       |
| Xylene (p/m)                            | ND     | 0.00100            | "                                     |                                       |                  |                |              |       |
| Xylene (o)                              | ND     | 0.00100            | "                                     |                                       |                  |                |              |       |
| Surrogate: a,a,a-Trifluorotoluene       | 40.0   |                    | ug/l                                  | 50.0                                  |                  | 80.0           | 80-120       |       |
| Surrogate: 4-Bromofluorobenzene         | 43.8   |                    | "                                     | 50.0                                  |                  | 87.6           | 80-120       |       |
| <b>LCS (EC71307-BS1)</b>                |        |                    | Prepared & Analyzed: 03/13/07         |                                       |                  |                |              |       |
| Benzene                                 | 0.0438 | 0.00100            | mg/L                                  | 0.0500                                |                  | 87.6           | 80-120       |       |
| Toluene                                 | 0.0413 | 0.00100            | "                                     | 0.0500                                |                  | 82.6           | 80-120       |       |
| Ethylbenzene                            | 0.0422 | 0.00100            | "                                     | 0.0500                                |                  | 84.4           | 80-120       |       |
| Xylene (p/m)                            | 0.0843 | 0.00100            | "                                     | 0.100                                 |                  | 84.3           | 80-120       |       |
| Xylene (o)                              | 0.0406 | 0.00100            | "                                     | 0.0500                                |                  | 81.2           | 80-120       |       |
| Surrogate: a,a,a-Trifluorotoluene       | 42.5   |                    | ug/l                                  | 50.0                                  |                  | 85.0           | 80-120       |       |
| Surrogate: 4-Bromofluorobenzene         | 47.6   |                    | "                                     | 50.0                                  |                  | 95.2           | 80-120       |       |
| <b>Calibration Check (EC71307-CCV1)</b> |        |                    | Prepared: 03/13/07 Analyzed: 03/14/07 |                                       |                  |                |              |       |
| Benzene                                 | 0.0450 |                    | mg/L                                  | 0.0500                                |                  | 90.0           | 80-120       |       |
| Toluene                                 | 0.0414 |                    | "                                     | 0.0500                                |                  | 82.8           | 80-120       |       |
| Ethylbenzene                            | 0.0401 |                    | "                                     | 0.0500                                |                  | 80.2           | 80-120       |       |
| Xylene (p/m)                            | 0.0802 |                    | "                                     | 0.100                                 |                  | 80.2           | 80-120       |       |
| Xylene (o)                              | 0.0401 |                    | "                                     | 0.0500                                |                  | 80.2           | 80-120       |       |
| Surrogate: a,a,a-Trifluorotoluene       | 41.5   |                    | ug/l                                  | 50.0                                  |                  | 83.0           | 80-120       |       |
| Surrogate: 4-Bromofluorobenzene         | 42.2   |                    | "                                     | 50.0                                  |                  | 84.4           | 80-120       |       |
| <b>Matrix Spike (EC71307-MS1)</b>       |        |                    | Source: 7C09031-03                    | Prepared: 03/13/07 Analyzed: 03/14/07 |                  |                |              |       |
| Benzene                                 | 0.0423 | 0.00100            | mg/L                                  | 0.0500                                | ND               | 84.6           | 80-120       |       |
| Toluene                                 | 0.0408 | 0.00100            | "                                     | 0.0500                                | ND               | 81.6           | 80-120       |       |
| Ethylbenzene                            | 0.0402 | 0.00100            | "                                     | 0.0500                                | ND               | 80.4           | 80-120       |       |
| Xylene (p/m)                            | 0.0809 | 0.00100            | "                                     | 0.100                                 | ND               | 80.9           | 80-120       |       |
| Xylene (o)                              | 0.0401 | 0.00100            | "                                     | 0.0500                                | ND               | 80.2           | 80-120       |       |
| Surrogate: a,a,a-Trifluorotoluene       | 44.0   |                    | ug/l                                  | 50.0                                  |                  | 88.0           | 80-120       |       |
| Surrogate: 4-Bromofluorobenzene         | 47.5   |                    | "                                     | 50.0                                  |                  | 95.0           | 80-120       |       |

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**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch EC71307 - EPA 5030C (GC)**

**Matrix Spike Dup (EC71307-MSD1)**

**Source: 7C09031-03**

**Prepared: 03/13/07 Analyzed: 03/14/07**

|                                   |        |         |      |        |    |      |        |       |    |  |
|-----------------------------------|--------|---------|------|--------|----|------|--------|-------|----|--|
| Benzene                           | 0.0421 | 0.00100 | mg/L | 0.0500 | ND | 84.2 | 80-120 | 0.474 | 20 |  |
| Toluene                           | 0.0411 | 0.00100 | "    | 0.0500 | ND | 82.2 | 80-120 | 0.733 | 20 |  |
| Ethylbenzene                      | 0.0411 | 0.00100 | "    | 0.0500 | ND | 82.2 | 80-120 | 2.21  | 20 |  |
| Xylene (p/m)                      | 0.0815 | 0.00100 | "    | 0.100  | ND | 81.5 | 80-120 | 0.739 | 20 |  |
| Xylene (o)                        | 0.0403 | 0.00100 | "    | 0.0500 | ND | 80.6 | 80-120 | 0.498 | 20 |  |
| Surrogate: a,a,a-Trifluorotoluene | 42.9   |         | ug/l | 50.0   |    | 85.8 | 80-120 |       |    |  |
| Surrogate: 4-Bromofluorobenzene   | 43.0   |         | "    | 50.0   |    | 86.0 | 80-120 |       |    |  |

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**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

| Analyte                                              | Result | Reporting<br>Limit | Units | Spike<br>Level                        | Source<br>Result | %REC<br>Limits                        | RPD    | RPD<br>Limit | Notes |
|------------------------------------------------------|--------|--------------------|-------|---------------------------------------|------------------|---------------------------------------|--------|--------------|-------|
| <b>Batch EC71305 - General Preparation (WetChem)</b> |        |                    |       |                                       |                  |                                       |        |              |       |
| <b>Blank (EC71305-BLK1)</b>                          |        |                    |       | Prepared & Analyzed: 03/13/07         |                  |                                       |        |              |       |
| Total Alkalinity                                     | 2.00   | 2.00               | mg/L  |                                       |                  |                                       |        |              |       |
| <b>LCS (EC71305-BS1)</b>                             |        |                    |       | Prepared & Analyzed: 03/13/07         |                  |                                       |        |              |       |
| Bicarbonate Alkalinity                               | 178    | 2.00               | mg/L  | 200                                   |                  | 89.0                                  | 85-115 |              |       |
| <b>Duplicate (EC71305-DUP1)</b>                      |        |                    |       | Source: 7C09022-01                    |                  | Prepared & Analyzed: 03/13/07         |        |              |       |
| Total Alkalinity                                     | 292    | 2.00               | mg/L  |                                       | 296              |                                       | 1.36   | 20           |       |
| <b>Reference (EC71305-SRM1)</b>                      |        |                    |       | Prepared & Analyzed: 03/13/07         |                  |                                       |        |              |       |
| Total Alkalinity                                     | 246    |                    | mg/L  | 250                                   |                  | 98.4                                  | 90-110 |              |       |
| <b>Batch EC71610 - General Preparation (WetChem)</b> |        |                    |       |                                       |                  |                                       |        |              |       |
| <b>Blank (EC71610-BLK1)</b>                          |        |                    |       | Prepared: 03/12/07 Analyzed: 03/13/07 |                  |                                       |        |              |       |
| Total Dissolved Solids                               | ND     | 10.0               | mg/L  |                                       |                  |                                       |        |              |       |
| <b>Duplicate (EC71610-DUP1)</b>                      |        |                    |       | Source: 7C09022-01                    |                  | Prepared: 03/12/07 Analyzed: 03/13/07 |        |              |       |
| Total Dissolved Solids                               | 1690   | 10.0               | mg/L  |                                       | 1550             |                                       | 8.64   | 20           |       |
| <b>Duplicate (EC71610-DUP2)</b>                      |        |                    |       | Source: 7C09026-02                    |                  | Prepared: 03/12/07 Analyzed: 03/13/07 |        |              |       |
| Total Dissolved Solids                               | 11500  | 10.0               | mg/L  |                                       | 10700            |                                       | 7.21   | 20           |       |
| <b>Batch EC71615 - General Preparation (WetChem)</b> |        |                    |       |                                       |                  |                                       |        |              |       |
| <b>Blank (EC71615-BLK1)</b>                          |        |                    |       | Prepared & Analyzed: 03/14/07         |                  |                                       |        |              |       |
| Chloride                                             | ND     | 0.500              | mg/L  |                                       |                  |                                       |        |              |       |
| Sulfate                                              | ND     | 0.500              | "     |                                       |                  |                                       |        |              |       |

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## General Chemistry Parameters by EPA / Standard Methods - Quality Control

### Environmental Lab of Texas

| Analyte                                              | Result | Reporting<br>Limit | Units | Spike<br>Level                | Source<br>Result | %REC                          | %REC<br>Limits | RPD   | RPD<br>Limit | Notes |
|------------------------------------------------------|--------|--------------------|-------|-------------------------------|------------------|-------------------------------|----------------|-------|--------------|-------|
| <b>Batch EC71615 - General Preparation (WetChem)</b> |        |                    |       |                               |                  |                               |                |       |              |       |
| <b>LCS (EC71615-BS1)</b>                             |        |                    |       | Prepared & Analyzed: 03/14/07 |                  |                               |                |       |              |       |
| Chloride                                             | 9.19   | 0.500              | mg/L  | 10.0                          |                  | 91.9                          | 80-120         |       |              |       |
| Sulfate                                              | 9.74   | 0.500              | "     | 10.0                          |                  | 97.4                          | 80-120         |       |              |       |
| <b>Calibration Check (EC71615-CCV1)</b>              |        |                    |       | Prepared & Analyzed: 03/14/07 |                  |                               |                |       |              |       |
| Chloride                                             | 8.13   |                    | mg/L  | 10.0                          |                  | 81.3                          | 80-120         |       |              |       |
| Sulfate                                              | 11.6   |                    | "     | 10.0                          |                  | 116                           | 80-120         |       |              |       |
| <b>Duplicate (EC71615-DUP1)</b>                      |        |                    |       | Source: 7C09022-01            |                  | Prepared & Analyzed: 03/14/07 |                |       |              |       |
| Chloride                                             | 326    | 10.0               | mg/L  |                               | 328              |                               |                | 0.612 | 20           |       |
| Sulfate                                              | 393    | 10.0               | "     |                               | 397              |                               |                | 1.01  | 20           |       |
| <b>Duplicate (EC71615-DUP2)</b>                      |        |                    |       | Source: 7C09027-01            |                  | Prepared & Analyzed: 03/14/07 |                |       |              |       |
| Chloride                                             | 700    | 12.5               | mg/L  |                               | 704              |                               |                | 0.570 | 20           |       |
| Sulfate                                              | 89.6   | 12.5               | "     |                               | 90.8             |                               |                | 1.33  | 20           |       |
| <b>Matrix Spike (EC71615-MS1)</b>                    |        |                    |       | Source: 7C09022-01            |                  | Prepared & Analyzed: 03/14/07 |                |       |              |       |
| Sulfate                                              | 621    | 10.0               | mg/L  | 200                           | 397              | 112                           | 80-120         |       |              |       |
| Chloride                                             | 553    | 10.0               | "     | 200                           | 328              | 112                           | 80-120         |       |              |       |
| <b>Matrix Spike (EC71615-MS2)</b>                    |        |                    |       | Source: 7C09027-01            |                  | Prepared & Analyzed: 03/14/07 |                |       |              |       |
| Chloride                                             | 961    | 12.5               | mg/L  | 250                           | 704              | 103                           | 80-120         |       |              |       |
| Sulfate                                              | 313    | 12.5               | "     | 250                           | 90.8             | 88.9                          | 80-120         |       |              |       |

Environmental Lab of Texas

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

| Analyte                                             | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|-----------------------------------------------------|--------|--------------------|-------|----------------|------------------|------|----------------|------|--------------|-------|
| <b>Batch EC72614 - General Preparation (Metals)</b> |        |                    |       |                |                  |      |                |      |              |       |
| <b>Blank (EC72614-BLK1)</b>                         |        |                    |       |                |                  |      |                |      |              |       |
| Prepared & Analyzed: 03/23/07                       |        |                    |       |                |                  |      |                |      |              |       |
| Calcium                                             | ND     | 0.200              | mg/L  |                |                  |      |                |      |              |       |
| Magnesium                                           | ND     | 0.500              | "     |                |                  |      |                |      |              |       |
| Potassium                                           | ND     | 0.500              | "     |                |                  |      |                |      |              |       |
| Sodium                                              | ND     | 0.500              | "     |                |                  |      |                |      |              |       |
| <b>LCS (EC72614-BS1)</b>                            |        |                    |       |                |                  |      |                |      |              |       |
| Prepared & Analyzed: 03/23/07                       |        |                    |       |                |                  |      |                |      |              |       |
| Calcium                                             | 2.46   | 0.200              | mg/L  | 2.50           |                  | 98.4 | 75-125         |      |              |       |
| Magnesium                                           | 2.22   | 0.500              | "     | 2.50           |                  | 88.8 | 75-125         |      |              |       |
| Potassium                                           | 1.98   | 0.500              | "     | 2.50           |                  | 79.2 | 75-125         |      |              |       |
| Sodium                                              | 2.58   | 0.500              | "     | 2.50           |                  | 103  | 75-125         |      |              |       |
| <b>Duplicate (EC72614-DUP1)</b>                     |        |                    |       |                |                  |      |                |      |              |       |
| Source: 7C09022-01 Prepared & Analyzed: 03/23/07    |        |                    |       |                |                  |      |                |      |              |       |
| Calcium                                             | 123    | 0.200              | mg/L  |                | 125              |      |                | 1.61 | 25           |       |
| Magnesium                                           | 73.5   | 0.500              | "     |                | 71.3             |      |                | 3.04 | 25           |       |
| Potassium                                           | 9.49   | 0.500              | "     |                | 8.45             |      |                | 11.6 | 25           |       |
| Sodium                                              | 221    | 0.500              | "     |                | 247              |      |                | 11.1 | 25           |       |
| <b>Matrix Spike (EC72614-MS1)</b>                   |        |                    |       |                |                  |      |                |      |              |       |
| Source: 7C09022-01 Prepared & Analyzed: 03/23/07    |        |                    |       |                |                  |      |                |      |              |       |
| Calcium                                             | 132    | 0.200              | mg/L  | 2.50           | 125              | 280  | 75-125         |      |              | MS-1  |
| Magnesium                                           | 73.1   | 0.500              | "     | 2.50           | 71.3             | 72.0 | 75-125         |      |              | MS-1  |
| Potassium                                           | 11.3   | 0.500              | "     | 2.50           | 8.45             | 114  | 75-125         |      |              |       |
| Sodium                                              | 237    | 0.500              | "     | 2.50           | 247              | NR   | 75-125         |      |              | MS-1  |
| <b>Matrix Spike Dup (EC72614-MSD1)</b>              |        |                    |       |                |                  |      |                |      |              |       |
| Source: 7C09022-01 Prepared & Analyzed: 03/23/07    |        |                    |       |                |                  |      |                |      |              |       |
| Calcium                                             | 132    | 0.200              | mg/L  | 2.50           | 125              | 280  | 75-125         | 0.00 | 25           | MS-1  |
| Magnesium                                           | 74.2   | 0.500              | "     | 2.50           | 71.3             | 116  | 75-125         | 1.49 | 25           |       |
| Potassium                                           | 11.1   | 0.500              | "     | 2.50           | 8.45             | 106  | 75-125         | 1.79 | 25           |       |
| Sodium                                              | 243    | 0.500              | "     | 2.50           | 247              | NR   | 75-125         | 2.50 | 25           | MS-1  |

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

O-04 This sample was analyzed outside the EPA recommended holding time.  
MS-1 Recovery of sample outside of historical limits due to matrix interference.  
DET Analyte DETECTED  
ND Analyte NOT DETECTED at or above the reporting limit  
NR Not Reported  
dry Sample results reported on a dry weight basis  
RPD Relative Percent Difference  
LCS Laboratory Control Spike  
MS Matrix Spike  
Dup Duplicate

Report Approved By:



Date:

3/29/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

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If you have received this material in error, please notify us immediately at 432-563-1800.

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**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Rice  
Date/ Time: 3/9/07 1315  
Lab ID #: 7C09022  
Initials: Om

**Sample Receipt Checklist**

|     |                                                        |            |    | Client Initials          |
|-----|--------------------------------------------------------|------------|----|--------------------------|
| #1  | Temperature of container/ cooler?                      | <u>Yes</u> | No | <u>1.0</u> °C            |
| #2  | Shipping container in good condition?                  | <u>Yes</u> | No |                          |
| #3  | Custody Seals intact on shipping container/ cooler?    | <u>Yes</u> | No | Not Present              |
| #4  | Custody Seals intact on sample bottles/ container?     | <u>Yes</u> | No | Not Present              |
| #5  | Chain of Custody present?                              | <u>Yes</u> | No |                          |
| #6  | Sample instructions complete of Chain of Custody?      | <u>Yes</u> | No |                          |
| #7  | Chain of Custody signed when relinquished/ received?   | <u>Yes</u> | No |                          |
| #8  | Chain of Custody agrees with sample label(s)?          | <u>Yes</u> | No | ID written on Cont./ Lid |
| #9  | Container label(s) legible and intact?                 | <u>Yes</u> | No | Not Applicable           |
| #10 | Sample matrix/ properties agree with Chain of Custody? | <u>Yes</u> | No |                          |
| #11 | Containers supplied by ELOT?                           | <u>Yes</u> | No |                          |
| #12 | Samples in proper container/ bottle?                   | <u>Yes</u> | No | See Below                |
| #13 | Samples properly preserved?                            | <u>Yes</u> | No | See Below                |
| #14 | Sample bottles intact?                                 | <u>Yes</u> | No |                          |
| #15 | Preservations documented on Chain of Custody?          | <u>Yes</u> | No |                          |
| #16 | Containers documented on Chain of Custody?             | <u>Yes</u> | No |                          |
| #17 | Sufficient sample amount for indicated test(s)?        | <u>Yes</u> | No | See Below                |
| #18 | All samples received within sufficient hold time?      | <u>Yes</u> | No | See Below                |
| #19 | Subcontract of sample(s)?                              | <u>Yes</u> | No | <u>Not Applicable</u>    |
| #20 | VOC samples have zero headspace?                       | <u>Yes</u> | No | Not Applicable           |

**Variance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

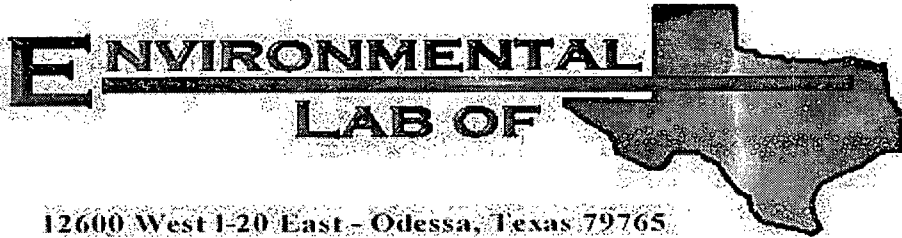
- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event

## CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

**Phone: 432-563-1800**  
**Fax: 432-563-1713**

[rozanne@valornet.com](mailto:rozanne@valornet.com)

[illegible]



12600 West I-20 East - Odessa, Texas 79765

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## Analytical Report

**Prepared for:**

Kristin Farris-Pope

Rice Operating Co.

122 W. Taylor

Hobbs, NM 88240

Project: EME M-9 SWD

Project Number: None Given

Location: T20S-R37-Sec9M ~ Lea County New Mexico

Lab Order Number: 7F06017

Report Date: 06/27/07

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

#### ANALYTICAL REPORT FOR SAMPLES

| Sample ID        | Laboratory ID | Matrix | Date Sampled   | Date Received    |
|------------------|---------------|--------|----------------|------------------|
| Monitor Well #1A | 7F06017-01    | Water  | 06/01/07 12:45 | 06-06-2007 12:51 |
| Monitor Well #2  | 7F06017-02    | Water  | 06/01/07 12:00 | 06-06-2007 12:51 |
| Monitor Well #3  | 7F06017-03    | Water  | 06/01/07 11:15 | 06-06-2007 12:51 |
| Monitor Well #4  | 7F06017-04    | Water  | 06/01/07 09:35 | 06-06-2007 12:51 |
| Monitor Well #5  | 7F06017-05    | Water  | 06/01/07 10:30 | 06-06-2007 12:51 |
| Water Well       | 7F06017-06    | Water  | 06/01/07 14:50 | 06-06-2007 12:51 |

Rice Operating Co.  
122 W. Taylor  
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Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC**  
**Environmental Lab of Texas**

| Analyte                                   | Result | Reporting<br>Limit | Units  | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|-------------------------------------------|--------|--------------------|--------|----------|---------|----------|----------|-----------|-------|
| <b>Monitor Well #5 (7F06017-05) Water</b> |        |                    |        |          |         |          |          |           |       |
| Benzene                                   | ND     | 0.00100            | mg/L   | 1        | EF70802 | 06/08/07 | 06/09/07 | EPA 8021B |       |
| Toluene                                   | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Ethylbenzene                              | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Xylene (p/m)                              | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| Xylene (o)                                | ND     | 0.00100            | "      | "        | "       | "        | "        | "         |       |
| <i>Surrogate: a,a,a-Trifluorotoluene</i>  |        | 116 %              | 80-120 | "        | "       | "        | "        | "         |       |
| <i>Surrogate: 4-Bromofluorobenzene</i>    |        | 97.8 %             | 80-120 | "        | "       | "        | "        | "         |       |

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods**  
**Environmental Lab of Texas**

| Analyte                                    | Result | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method     | Notes |
|--------------------------------------------|--------|--------------------|-------|----------|---------|----------|----------|------------|-------|
| <b>Monitor Well #1A (7F06017-01) Water</b> |        |                    |       |          |         |          |          |            |       |
| Total Alkalinity                           | 304    | 2.00               | mg/L  | 1        | EF71309 | 06/13/07 | 06/13/07 | EPA 310.1M |       |
| Chloride                                   | 401    | 10.0               | "     | 20       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| Total Dissolved Solids                     | 1590   | 10.0               | "     | 1        | EF71110 | 06/07/07 | 06/11/07 | EPA 160.1  |       |
| Sulfate                                    | 438    | 10.0               | "     | 20       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| <b>Monitor Well #2 (7F06017-02) Water</b>  |        |                    |       |          |         |          |          |            |       |
| Total Alkalinity                           | 348    | 2.00               | mg/L  | 1        | EF71309 | 06/13/07 | 06/13/07 | EPA 310.1M |       |
| Chloride                                   | 498    | 12.5               | "     | 25       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| Total Dissolved Solids                     | 1890   | 10.0               | "     | 1        | EF71110 | 06/07/07 | 06/11/07 | EPA 160.1  |       |
| Sulfate                                    | 535    | 12.5               | "     | 25       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| <b>Monitor Well #3 (7F06017-03) Water</b>  |        |                    |       |          |         |          |          |            |       |
| Total Alkalinity                           | 296    | 2.00               | mg/L  | 1        | EF71309 | 06/13/07 | 06/13/07 | EPA 310.1M |       |
| Chloride                                   | 413    | 12.5               | "     | 25       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| Total Dissolved Solids                     | 2000   | 10.0               | "     | 1        | EF71110 | 06/07/07 | 06/11/07 | EPA 160.1  |       |
| Sulfate                                    | 649    | 12.5               | "     | 25       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| <b>Monitor Well #4 (7F06017-04) Water</b>  |        |                    |       |          |         |          |          |            |       |
| Total Alkalinity                           | 264    | 2.00               | mg/L  | 1        | EF71309 | 06/13/07 | 06/13/07 | EPA 310.1M |       |
| Chloride                                   | 911    | 25.0               | "     | 50       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| Total Dissolved Solids                     | 2840   | 10.0               | "     | 1        | EF71110 | 06/07/07 | 06/11/07 | EPA 160.1  |       |
| Sulfate                                    | 816    | 25.0               | "     | 50       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| <b>Monitor Well #5 (7F06017-05) Water</b>  |        |                    |       |          |         |          |          |            |       |
| Total Alkalinity                           | 280    | 2.00               | mg/L  | 1        | EF71309 | 06/13/07 | 06/13/07 | EPA 310.1M |       |
| Chloride                                   | 1140   | 25.0               | "     | 50       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| Total Dissolved Solids                     | 2520   | 10.0               | "     | 1        | EF71110 | 06/07/07 | 06/11/07 | EPA 160.1  |       |
| Sulfate                                    | 280    | 25.0               | "     | 50       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| <b>Water Well (7F06017-06) Water</b>       |        |                    |       |          |         |          |          |            |       |
| Total Alkalinity                           | 264    | 2.00               | mg/L  | 1        | EF71309 | 06/13/07 | 06/13/07 | EPA 310.1M |       |
| Chloride                                   | 568    | 12.5               | "     | 25       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |
| Total Dissolved Solids                     | 2120   | 10.0               | "     | 1        | EF71110 | 06/07/07 | 06/11/07 | EPA 160.1  |       |
| Sulfate                                    | 575    | 12.5               | "     | 25       | EF71203 | 06/12/07 | 06/12/07 | EPA 300.0  |       |

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods**  
**Environmental Lab of Texas**

| Analyte                                    | Result | Reporting<br>Limit | Units | Dilution | Batch   | Prepared | Analyzed | Method    | Notes |
|--------------------------------------------|--------|--------------------|-------|----------|---------|----------|----------|-----------|-------|
| <b>Monitor Well #1A (7F06017-01) Water</b> |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 119    | 4.05               | mg/L  | 50       | EF70807 | 06/08/07 | 06/08/07 | EPA 6010B |       |
| Magnesium                                  | 55.0   | 0.360              | "     | 10       | "       | "        | "        | "         |       |
| Potassium                                  | 9.03   | 0.600              | "     | "        | "       | "        | "        | "         |       |
| Sodium                                     | 281    | 2.15               | "     | 50       | "       | "        | "        | "         |       |
| <b>Monitor Well #2 (7F06017-02) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 155    | 4.05               | mg/L  | 50       | EF70807 | 06/08/07 | 06/08/07 | EPA 6010B |       |
| Magnesium                                  | 72.5   | 1.80               | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 9.94   | 0.600              | "     | 10       | "       | "        | "        | "         |       |
| Sodium                                     | 339    | 4.30               | "     | 100      | "       | "        | "        | "         |       |
| <b>Monitor Well #3 (7F06017-03) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 146    | 4.05               | mg/L  | 50       | EF70807 | 06/08/07 | 06/08/07 | EPA 6010B |       |
| Magnesium                                  | 57.9   | 1.80               | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 6.62   | 0.600              | "     | 10       | "       | "        | "        | "         |       |
| Sodium                                     | 325    | 4.30               | "     | 100      | "       | "        | "        | "         |       |
| <b>Monitor Well #4 (7F06017-04) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 192    | 4.05               | mg/L  | 50       | EF70807 | 06/08/07 | 06/08/07 | EPA 6010B |       |
| Magnesium                                  | 109    | 1.80               | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 10.9   | 0.600              | "     | 10       | "       | "        | "        | "         |       |
| Sodium                                     | 478    | 4.30               | "     | 100      | "       | "        | "        | "         |       |
| <b>Monitor Well #5 (7F06017-05) Water</b>  |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 160    | 4.05               | mg/L  | 50       | EF70807 | 06/08/07 | 06/08/07 | EPA 6010B |       |
| Magnesium                                  | 87.6   | 1.80               | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 10.3   | 0.600              | "     | 10       | "       | "        | "        | "         |       |
| Sodium                                     | 473    | 4.30               | "     | 100      | "       | "        | "        | "         |       |
| <b>Water Well (7F06017-06) Water</b>       |        |                    |       |          |         |          |          |           |       |
| Calcium                                    | 80.4   | 4.05               | mg/L  | 50       | EF70807 | 06/08/07 | 06/08/07 | EPA 6010B |       |
| Magnesium                                  | 64.9   | 1.80               | "     | "        | "       | "        | "        | "         |       |
| Potassium                                  | 8.43   | 0.600              | "     | 10       | "       | "        | "        | "         |       |
| Sodium                                     | 486    | 4.30               | "     | 100      | "       | "        | "        | "         |       |

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch EF70802 - EPA 5030C (GC)**

**Blank (EF70802-BLK1)**

Prepared & Analyzed: 06/08/07

|                                   |      |         |      |      |  |      |        |  |  |  |
|-----------------------------------|------|---------|------|------|--|------|--------|--|--|--|
| Benzene                           | ND   | 0.00100 | mg/L |      |  |      |        |  |  |  |
| Toluene                           | ND   | 0.00100 | "    |      |  |      |        |  |  |  |
| Ethylbenzene                      | ND   | 0.00100 | "    |      |  |      |        |  |  |  |
| Xylene (p/m)                      | ND   | 0.00100 | "    |      |  |      |        |  |  |  |
| Xylene (o)                        | ND   | 0.00100 | "    |      |  |      |        |  |  |  |
| Surrogate: a,a,a-Trifluorotoluene | 54.1 |         | ug/l | 50.0 |  | 108  | 80-120 |  |  |  |
| Surrogate: 4-Bromofluorobenzene   | 45.4 |         | "    | 50.0 |  | 90.8 | 80-120 |  |  |  |

**LCS (EF70802-BS1)**

Prepared & Analyzed: 06/08/07

|                                   |        |         |      |        |  |     |        |  |  |  |
|-----------------------------------|--------|---------|------|--------|--|-----|--------|--|--|--|
| Benzene                           | 0.0548 | 0.00100 | mg/L | 0.0500 |  | 110 | 80-120 |  |  |  |
| Toluene                           | 0.0556 | 0.00100 | "    | 0.0500 |  | 111 | 80-120 |  |  |  |
| Ethylbenzene                      | 0.0543 | 0.00100 | "    | 0.0500 |  | 109 | 80-120 |  |  |  |
| Xylene (p/m)                      | 0.101  | 0.00100 | "    | 0.100  |  | 101 | 80-120 |  |  |  |
| Xylene (o)                        | 0.0569 | 0.00100 | "    | 0.0500 |  | 114 | 80-120 |  |  |  |
| Surrogate: a,a,a-Trifluorotoluene | 54.6   |         | ug/l | 50.0   |  | 109 | 80-120 |  |  |  |
| Surrogate: 4-Bromofluorobenzene   | 51.7   |         | "    | 50.0   |  | 103 | 80-120 |  |  |  |

**Calibration Check (EF70802-CCV1)**

Prepared: 06/08/07 Analyzed: 06/09/07

|                                   |        |  |      |        |  |      |        |  |  |  |
|-----------------------------------|--------|--|------|--------|--|------|--------|--|--|--|
| Benzene                           | 0.0576 |  | mg/L | 0.0500 |  | 115  | 80-120 |  |  |  |
| Toluene                           | 0.0567 |  | "    | 0.0500 |  | 113  | 80-120 |  |  |  |
| Ethylbenzene                      | 0.0537 |  | "    | 0.0500 |  | 107  | 80-120 |  |  |  |
| Xylene (p/m)                      | 0.0999 |  | "    | 0.100  |  | 99.9 | 80-120 |  |  |  |
| Xylene (o)                        | 0.0573 |  | "    | 0.0500 |  | 115  | 80-120 |  |  |  |
| Surrogate: a,a,a-Trifluorotoluene | 57.9   |  | ug/l | 50.0   |  | 116  | 80-120 |  |  |  |
| Surrogate: 4-Bromofluorobenzene   | 53.0   |  | "    | 50.0   |  | 106  | 80-120 |  |  |  |

**Matrix Spike (EF70802-MS1)**

Source: 7F06019-03

Prepared: 06/08/07 Analyzed: 06/09/07

|                                   |        |         |      |        |    |     |        |  |  |    |
|-----------------------------------|--------|---------|------|--------|----|-----|--------|--|--|----|
| Benzene                           | 0.0598 | 0.00100 | mg/L | 0.0500 | ND | 120 | 80-120 |  |  |    |
| Toluene                           | 0.0593 | 0.00100 | "    | 0.0500 | ND | 119 | 80-120 |  |  |    |
| Ethylbenzene                      | 0.0584 | 0.00100 | "    | 0.0500 | ND | 117 | 80-120 |  |  |    |
| Xylene (p/m)                      | 0.107  | 0.00100 | "    | 0.100  | ND | 107 | 80-120 |  |  |    |
| Xylene (o)                        | 0.0614 | 0.00100 | "    | 0.0500 | ND | 123 | 80-120 |  |  | M1 |
| Surrogate: a,a,a-Trifluorotoluene | 58.4   |         | ug/l | 50.0   |    | 117 | 80-120 |  |  |    |
| Surrogate: 4-Bromofluorobenzene   | 56.2   |         | "    | 50.0   |    | 112 | 80-120 |  |  |    |

Environmental Lab of Texas

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Organics by GC - Quality Control**  
**Environmental Lab of Texas**

| Analyte                                     | Result | Reporting<br>Limit        | Units | Spike<br>Level                               | Source<br>Result | %REC | %REC<br>Limits | RPD  | RPD<br>Limit | Notes |
|---------------------------------------------|--------|---------------------------|-------|----------------------------------------------|------------------|------|----------------|------|--------------|-------|
| <b>Batch EF70802 - EPA 5030C (GC)</b>       |        |                           |       |                                              |                  |      |                |      |              |       |
| <b>Matrix Spike Dup (EF70802-MSD1)</b>      |        | <b>Source: 7F06019-03</b> |       | <b>Prepared: 06/08/07 Analyzed: 06/09/07</b> |                  |      |                |      |              |       |
| Benzene                                     | 0.0565 | 0.00100                   | mg/L  | 0.0500                                       | ND               | 113  | 80-120         | 6.01 | 20           |       |
| Toluene                                     | 0.0566 | 0.00100                   | "     | 0.0500                                       | ND               | 113  | 80-120         | 5.17 | 20           |       |
| Ethylbenzene                                | 0.0556 | 0.00100                   | "     | 0.0500                                       | ND               | 111  | 80-120         | 5.26 | 20           |       |
| Xylene (p/m)                                | 0.102  | 0.00100                   | "     | 0.100                                        | ND               | 102  | 80-120         | 4.78 | 20           |       |
| Xylene (o)                                  | 0.0584 | 0.00100                   | "     | 0.0500                                       | ND               | 117  | 80-120         | 5.00 | 20           |       |
| Surrogate: <i>a, a, a</i> -Trifluorotoluene | 58.3   |                           | ug/l  | 50.0                                         |                  | 117  | 80-120         |      |              |       |
| Surrogate: 4-Bromofluorobenzene             | 54.2   |                           | "     | 50.0                                         |                  | 108  | 80-120         |      |              |       |

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch EF71110 - General Preparation (WetChem)**

**Blank (EF71110-BLK1)**

Prepared: 06/07/07 Analyzed: 06/11/07

Total Dissolved Solids ND 10.0 mg/L

**Duplicate (EF71110-DUP1)**

Source: 7F06016-01

Prepared: 06/07/07 Analyzed: 06/11/07

Total Dissolved Solids 1270 10.0 mg/L 1210 4.84 20

**Duplicate (EF71110-DUP2)**

Source: 7F06019-03

Prepared: 06/07/07 Analyzed: 06/11/07

Total Dissolved Solids 7020 10.0 mg/L 6900 1.72 20

**Batch EF71203 - General Preparation (WetChem)**

**Blank (EF71203-BLK1)**

Prepared & Analyzed: 06/12/07

Chloride ND 0.500 mg/L

Sulfate ND 0.500 "

**LCS (EF71203-BS1)**

Prepared & Analyzed: 06/12/07

Chloride 9.91 0.500 mg/L 10.0 99.1 80-120

Sulfate 9.45 0.500 " 10.0 94.5 80-120

**Calibration Check (EF71203-CCV1)**

Prepared & Analyzed: 06/12/07

Chloride 9.55 mg/L 10.0 95.5 80-120

Sulfate 12.0 " 10.0 120 80-120

**Duplicate (EF71203-DUP1)**

Source: 7F05004-01

Prepared & Analyzed: 06/12/07

Sulfate 586 5.00 mg/L 586 0.00 20

Chloride 289 5.00 " 282 2.45 20

**Duplicate (EF71203-DUP2)**

Source: 7F06017-01

Prepared & Analyzed: 06/12/07

Chloride 428 10.0 mg/L 401 6.51 20

Sulfate 456 10.0 " 438 4.03 20

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**General Chemistry Parameters by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

| Analyte                                              | Result | Reporting<br>Limit                       | Units | Spike<br>Level                           | Source<br>Result | %REC<br>Limits | RPD<br>Limit | Notes |
|------------------------------------------------------|--------|------------------------------------------|-------|------------------------------------------|------------------|----------------|--------------|-------|
| <b>Batch EF71203 - General Preparation (WetChem)</b> |        |                                          |       |                                          |                  |                |              |       |
| <b>Matrix Spike (EF71203-MS1)</b>                    |        | <b>Source: 7F05004-01</b>                |       | <b>Prepared &amp; Analyzed: 06/12/07</b> |                  |                |              |       |
| Chloride                                             | 378    | 5.00                                     | mg/L  | 100                                      | 282              | 96.0           | 80-120       |       |
| Sulfate                                              | 661    | 5.00                                     | "     | 100                                      | 586              | 75.0           | 80-120       | QM-10 |
| <b>Matrix Spike (EF71203-MS2)</b>                    |        | <b>Source: 7F06017-01</b>                |       | <b>Prepared &amp; Analyzed: 06/12/07</b> |                  |                |              |       |
| Sulfate                                              | 654    | 10.0                                     | mg/L  | 200                                      | 438              | 108            | 80-120       |       |
| Chloride                                             | 623    | 10.0                                     | "     | 200                                      | 401              | 111            | 80-120       |       |
| <b>Batch EF71309 - General Preparation (WetChem)</b> |        |                                          |       |                                          |                  |                |              |       |
| <b>Blank (EF71309-BLK1)</b>                          |        | <b>Prepared &amp; Analyzed: 06/13/07</b> |       |                                          |                  |                |              |       |
| Total Alkalinity                                     | ND     | 2.00                                     | mg/L  |                                          |                  |                |              |       |
| Carbonate Alkalinity                                 | ND     | 0.100                                    | "     |                                          |                  |                |              |       |
| Bicarbonate Alkalinity                               | ND     | 2.00                                     | "     |                                          |                  |                |              |       |
| Hydroxide Alkalinity                                 | ND     | 0.100                                    | "     |                                          |                  |                |              |       |
| <b>LCS (EF71309-BS1)</b>                             |        | <b>Prepared &amp; Analyzed: 06/13/07</b> |       |                                          |                  |                |              |       |
| Bicarbonate Alkalinity                               | 174    | 2.00                                     | mg/L  | 200                                      |                  | 87.0           | 85-115       |       |
| <b>Duplicate (EF71309-DUP1)</b>                      |        | <b>Source: 7F06017-02</b>                |       | <b>Prepared &amp; Analyzed: 06/13/07</b> |                  |                |              |       |
| Total Alkalinity                                     | 348    | 2.00                                     | mg/L  |                                          | 348              |                | 0.00         | 20    |
| <b>Reference (EF71309-SRM1)</b>                      |        | <b>Prepared &amp; Analyzed: 06/13/07</b> |       |                                          |                  |                |              |       |
| Total Alkalinity                                     | 250    |                                          | mg/L  | 250                                      |                  | 100            | 90-110       |       |

Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

**Total Metals by EPA / Standard Methods - Quality Control**  
**Environmental Lab of Texas**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch EF70807 - 6010B/No Digestion**

**Blank (EF70807-BLK1)**

Prepared & Analyzed: 06/08/07

|           |    |        |      |  |  |  |  |  |  |  |
|-----------|----|--------|------|--|--|--|--|--|--|--|
| Calcium   | ND | 0.0810 | mg/L |  |  |  |  |  |  |  |
| Magnesium | ND | 0.0360 | "    |  |  |  |  |  |  |  |
| Potassium | ND | 0.0600 | "    |  |  |  |  |  |  |  |
| Sodium    | ND | 0.0430 | "    |  |  |  |  |  |  |  |

**Calibration Check (EF70807-CCV1)**

Prepared & Analyzed: 06/08/07

|           |      |  |      |      |  |      |        |  |  |  |
|-----------|------|--|------|------|--|------|--------|--|--|--|
| Calcium   | 1.78 |  | mg/L | 2.00 |  | 89.0 | 85-115 |  |  |  |
| Magnesium | 1.83 |  | "    | 2.00 |  | 91.5 | 85-115 |  |  |  |
| Potassium | 2.28 |  | "    | 2.00 |  | 114  | 85-115 |  |  |  |
| Sodium    | 1.82 |  | "    | 2.00 |  | 91.0 | 85-115 |  |  |  |

**Duplicate (EF70807-DUP1)**

Source: 7F05011-03

Prepared & Analyzed: 06/08/07

|           |      |       |      |  |      |  |  |      |    |  |
|-----------|------|-------|------|--|------|--|--|------|----|--|
| Calcium   | 139  | 4.05  | mg/L |  | 139  |  |  | 0.00 | 20 |  |
| Magnesium | 29.5 | 0.360 | "    |  | 29.8 |  |  | 1.01 | 20 |  |
| Potassium | 6.37 | 0.600 | "    |  | 6.57 |  |  | 3.09 | 20 |  |
| Sodium    | 121  | 2.15  | "    |  | 124  |  |  | 2.45 | 20 |  |

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Rice Operating Co.  
122 W. Taylor  
Hobbs NM, 88240

Project: EME M-9 SWD  
Project Number: None Given  
Project Manager: Kristin Farris-Pope

Fax: (505) 397-1471

### Notes and Definitions

QM-10 LCS/LCSD were analyzed in place of MS/MSD.

M1 The MS and/or MSD were above the acceptance limits due to sample matrix interference. See Blank Spike (LCS).

DET Analyte DETECTED

ND Analyte NOT DETECTED at or above the reporting limit

NR Not Reported

dry Sample results reported on a dry weight basis

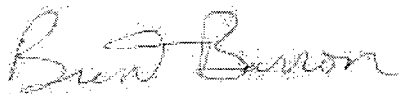
RPD Relative Percent Difference

LCS Laboratory Control Spike

MS Matrix Spike

Dup Duplicate

Report Approved By:



Date:

6/27/2007

Brent Barron, Laboratory Director/Corp. Technical Director  
Celey D. Keene, Org. Tech Director  
Raland K. Tuttle, Laboratory Consultant

James Mathis, QA/QC Officer  
Jeanne Mc Murrey, Inorg. Tech Director

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Environmental Lab of Texas

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Page 10 of 10



**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Rice  
Date/ Time: 6-6-07 12:51  
Lab ID #: TF06017  
Initials: AL

**Sample Receipt Checklist**

|     |                                                        |            |    | Client Initials           |
|-----|--------------------------------------------------------|------------|----|---------------------------|
| #1  | Temperature of container/ cooler?                      | <u>Yes</u> | No | <u>2.0</u> °C             |
| #2  | Shipping container in good condition?                  | <u>Yes</u> | No |                           |
| #3  | Custody Seals intact on shipping container/ cooler?    | <u>Yes</u> | No | Not Present               |
| #4  | Custody Seals intact on sample bottles/ container?     | <u>Yes</u> | No | Not Present               |
| #5  | Chain of Custody present?                              | <u>Yes</u> | No |                           |
| #6  | Sample instructions complete of Chain of Custody?      | <u>Yes</u> | No |                           |
| #7  | Chain of Custody signed when relinquished/ received?   | <u>Yes</u> | No |                           |
| #8  | Chain of Custody agrees with sample label(s)?          | <u>Yes</u> | No | ID written on Cont./ Lid  |
| #9  | Container label(s) legible and intact?                 | <u>Yes</u> | No | Not Applicable            |
| #10 | Sample matrix/ properties agree with Chain of Custody? | <u>Yes</u> | No |                           |
| #11 | Containers supplied by ELOT?                           | <u>Yes</u> | No |                           |
| #12 | Samples in proper container/ bottle?                   | <u>Yes</u> | No | See Below                 |
| #13 | Samples properly preserved?                            | <u>Yes</u> | No | See Below                 |
| #14 | Sample bottles intact?                                 | <u>Yes</u> | No |                           |
| #15 | Preservations documented on Chain of Custody?          | <u>Yes</u> | No |                           |
| #16 | Containers documented on Chain of Custody?             | <u>Yes</u> | No |                           |
| #17 | Sufficient sample amount for indicated test(s)?        | <u>Yes</u> | No | See Below                 |
| #18 | All samples received within sufficient hold time?      | <u>Yes</u> | No | See Below                 |
| #19 | Subcontract of sample(s)?                              | <u>Yes</u> | No | <del>Not Applicable</del> |
| #20 | VOC samples have zero headspace?                       | <u>Yes</u> | No | Not Applicable            |

**Variance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event

# **Analytical Report 287834**

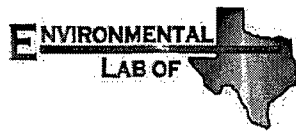
**for**

**Rice Operating Co.**

**Project Manager: Kristin Pope**

**EME M-9 SWD**

**30-AUG-07**



**12600 West I-20 East Odessa, Texas 79765**

**A Xenco Laboratories Company**

**NELAC certification numbers:**

**Houston, TX E871002 - Miami, FL E86678 - Tampa, FL E86675**

**Houston - Dallas - San Antonio - Austin - Tampa - Miami - Latin America**



30-AUG-07

Project Manager: **Kristin Pope**  
**Rice Operating Co.**  
122 West Taylor  
Hobbs, NM 88240

Reference: XENCO Report No: **287834**  
**EME M-9 SWD**  
Project Address: T20S-R37E-Sec9M ~ Lea County New Mexico

**Kristin Pope:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number 287834. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. Estimation of data uncertainty for this report is found in the quality control section of this report unless otherwise noted. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 287834 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

**Brent Barron**

Odessa Laboratory Director

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# Certificate of Analysis Summary 287834

Rice Operating Co., Hobbs, NM



Project Name: EME M-9 SWD

Project Id:

Date Received in Lab: Aug-13-07 04:33 pm

Contact: Kristin Pope

Report Date: 30-AUG-07

Project Location: T20S-R37E-Sec9M ~ Lea County New Me

Project Manager: Brent Barron, II

| <b>Analysis Requested</b>                     | <b>Lab Id:</b>    | 287834-001        | 287834-002       | 287834-003       | 287834-004       |
|-----------------------------------------------|-------------------|-------------------|------------------|------------------|------------------|
|                                               | <b>Field Id:</b>  | Monitor Well # 1A | Monitor Well # 2 | Monitor Well # 3 | Monitor Well # 4 |
|                                               | <b>Depth:</b>     |                   |                  |                  |                  |
|                                               | <b>Matrix:</b>    | WATER             | WATER            | WATER            | WATER            |
|                                               | <b>Sampled:</b>   | Aug-09-07 11:35   | Aug-09-07 10:45  | Aug-09-07 09:55  | Aug-09-07 09:05  |
| <b>Alkalinity by EPA 310.1</b>                | <b>Extracted:</b> |                   |                  |                  |                  |
|                                               | <b>Analyzed:</b>  | Aug-17-07 16:40   | Aug-17-07 16:40  | Aug-17-07 16:40  | Aug-17-07 16:40  |
|                                               | <b>Units/RL:</b>  | mg/L RL           | mg/L RL          | mg/L RL          | mg/L RL          |
| Alkalinity, Total (as CaCO3)                  |                   | 320 4.00          | 348 4.00         | 296 4.00         | 284 4.00         |
| <b>Inorganic Anions by EPA 300</b>            | <b>Extracted:</b> |                   |                  |                  |                  |
|                                               | <b>Analyzed:</b>  | Aug-21-07 17:44   | Aug-21-07 18:08  | Aug-21-07 18:33  | Aug-21-07 18:57  |
|                                               | <b>Units/RL:</b>  | mg/L RL           | mg/L RL          | mg/L RL          | mg/L RL          |
| Chloride                                      |                   | 410 50.0          | 470 50.0         | 398 50.0         | 863 50.0         |
| Sulfate                                       |                   | 393 50.0          | 524 50.0         | 665 50.0         | 775 50.0         |
| <b>Metals per ICP by SW846 6010B</b>          | <b>Extracted:</b> |                   |                  |                  |                  |
|                                               | <b>Analyzed:</b>  | Aug-15-07 15:38   | Aug-15-07 15:38  | Aug-15-07 15:38  | Aug-15-07 15:38  |
|                                               | <b>Units/RL:</b>  | mg/L RL           | mg/L RL          | mg/L RL          | mg/L RL          |
| Calcium                                       |                   | 102 0.100         | 115 0.100        | 97.4 0.100       | 120 0.100        |
| Magnesium                                     |                   | 48.1 0.010        | 45.1 0.010       | 42.4 0.010       | 6.27 0.010       |
| Potassium                                     |                   | 9.41 0.500        | 10.6 0.500       | 5.37 0.500       | 7.77 0.500       |
| Sodium                                        |                   | 265 0.500         | 367 0.500        | 320 0.500        | 367 0.500        |
| <b>Residue, Filterable (TDS) by EPA 160.1</b> | <b>Extracted:</b> |                   |                  |                  |                  |
|                                               | <b>Analyzed:</b>  | Aug-15-07 17:04   | Aug-15-07 17:04  | Aug-15-07 17:04  | Aug-15-07 17:04  |
|                                               | <b>Units/RL:</b>  | mg/L RL           | mg/L RL          | mg/L RL          | mg/L RL          |
| Total dissolved solids                        |                   | 1700 5.00         | 2050 5.00        | 1940 5.00        | 2880 5.00        |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented. Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Brent Barron

Odessa Laboratory Director



# Certificate of Analysis Summary 287834

Rice Operating Co., Hobbs, NM



Project Name: EME M-9 SWD

Project Id:

Date Received in Lab: Aug-13-07 04:33 pm

Contact: Kristin Pope

Report Date: 30-AUG-07

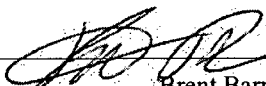
Project Location: T20S-R37E-Sec9M ~ Lea County New Me

Project Manager: Brent Barron, II

|                                               |                   |                  |                 |  |  |
|-----------------------------------------------|-------------------|------------------|-----------------|--|--|
| <b>Analysis Requested</b>                     | <b>Lab Id:</b>    | 287834-005       | 287834-006      |  |  |
|                                               | <b>Field Id:</b>  | Monitor Well # 5 | Water Well      |  |  |
|                                               | <b>Depth:</b>     |                  |                 |  |  |
|                                               | <b>Matrix:</b>    | WATER            | WATER           |  |  |
|                                               | <b>Sampled:</b>   | Aug-09-07 08:15  | Aug-09-07 13:50 |  |  |
| <b>Alkalinity by EPA 310.1</b>                | <b>Extracted:</b> |                  |                 |  |  |
|                                               | <b>Analyzed:</b>  | Aug-17-07 16:40  | Aug-17-07 16:40 |  |  |
|                                               | <b>Units/RL:</b>  | mg/L RL          | mg/L RL         |  |  |
| Alkalinity, Total (as CaCO3)                  |                   | 280 4.00         | 310 4.00        |  |  |
| <b>BTEX by EPA 8021B</b>                      | <b>Extracted:</b> | Aug-15-07 16:24  |                 |  |  |
|                                               | <b>Analyzed:</b>  | Aug-16-07 07:44  |                 |  |  |
|                                               | <b>Units/RL:</b>  | mg/L RL          |                 |  |  |
| Benzene                                       |                   | ND 0.0010        |                 |  |  |
| Toluene                                       |                   | ND 0.0010        |                 |  |  |
| Ethylbenzene                                  |                   | ND 0.0010        |                 |  |  |
| m,p-Xylene                                    |                   | ND 0.0020        |                 |  |  |
| o-Xylene                                      |                   | ND 0.0010        |                 |  |  |
| Total Xylenes                                 |                   | ND               |                 |  |  |
| Total BTEX                                    |                   | ND               |                 |  |  |
| <b>Inorganic Anions by EPA 300</b>            | <b>Extracted:</b> |                  |                 |  |  |
|                                               | <b>Analyzed:</b>  | Aug-21-07 19:21  | Aug-21-07 19:45 |  |  |
|                                               | <b>Units/RL:</b>  | mg/L RL          | mg/L RL         |  |  |
| Chloride                                      |                   | 1130 50.0        | 591 50.0        |  |  |
| Sulfate                                       |                   | 212 50.0         | 520 50.0        |  |  |
| <b>Metals per ICP by SW846 6010B</b>          | <b>Extracted:</b> |                  |                 |  |  |
|                                               | <b>Analyzed:</b>  | Aug-15-07 15:38  | Aug-15-07 15:38 |  |  |
|                                               | <b>Units/RL:</b>  | mg/L RL          | mg/L RL         |  |  |
| Calcium                                       |                   | 109 0.100        | 61.7 0.100      |  |  |
| Magnesium                                     |                   | 41.3 0.010       | 34.2 0.010      |  |  |
| Potassium                                     |                   | 7.10 0.500       | 6.57 0.500      |  |  |
| Sodium                                        |                   | 443 0.500        | 340 0.500       |  |  |
| <b>Residue, Filterable (TDS) by EPA 160.1</b> | <b>Extracted:</b> |                  |                 |  |  |
|                                               | <b>Analyzed:</b>  | Aug-15-07 17:04  | Aug-15-07 17:04 |  |  |
|                                               | <b>Units/RL:</b>  | mg/L RL          | mg/L RL         |  |  |
| Total dissolved solids                        |                   | 2390 5.00        | 1960 5.00       |  |  |

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Brent Barron  
Odessa Laboratory Director



## Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to effect the recovery of the spike concentration. This condition could also effect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the MQL and above the SQL.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.

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| (210) 509-3334 | (201) 509-3335 |
| (813) 620-2000 | (813) 620-2033 |
| (305) 823-8500 | (305) 823-8555 |



## Form 2 - Surrogate Recoveries

Project Name: EME M-9 SWD



Work Order #: 287834

Project ID:

Lab Batch #: 702457

Sample: 287724-006 S / MS

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

| BTEX by EPA 8021B    | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|----------------------|------------------|-----------------|-----------------|-------------------|-------|
| Analytes             |                  |                 |                 |                   |       |
| 4-Bromofluorobenzene | 0.0433           | 0.0500          | 87              | 80-120            |       |

Lab Batch #: 702457

Sample: 287724-006 SD / MSD

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

| BTEX by EPA 8021B    | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|----------------------|------------------|-----------------|-----------------|-------------------|-------|
| Analytes             |                  |                 |                 |                   |       |
| 4-Bromofluorobenzene | 0.0438           | 0.0500          | 88              | 80-120            |       |

Lab Batch #: 702457

Sample: 287834-005 / SMP

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

| BTEX by EPA 8021B    | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|----------------------|------------------|-----------------|-----------------|-------------------|-------|
| Analytes             |                  |                 |                 |                   |       |
| 4-Bromofluorobenzene | 0.0412           | 0.0500          | 82              | 80-120            |       |

Lab Batch #: 702457

Sample: 498280-1-BKS / BKS

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

| BTEX by EPA 8021B    | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|----------------------|------------------|-----------------|-----------------|-------------------|-------|
| Analytes             |                  |                 |                 |                   |       |
| 4-Bromofluorobenzene | 0.0473           | 0.0500          | 95              | 80-120            |       |

Lab Batch #: 702457

Sample: 498280-1-BLK / BLK

Batch: 1 Matrix: Water

Units: mg/L

### SURROGATE RECOVERY STUDY

| BTEX by EPA 8021B    | Amount Found [A] | True Amount [B] | Recovery %R [D] | Control Limits %R | Flags |
|----------------------|------------------|-----------------|-----------------|-------------------|-------|
| Analytes             |                  |                 |                 |                   |       |
| 4-Bromofluorobenzene | 0.0405           | 0.0500          | 81              | 80-120            |       |

\*\* Surrogates outside limits; data and surrogates confirmed by reanalysis

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] =  $100 * A / B$

All results are based on MDL and validated for QC purposes.



# Blank Spike Recovery



Project Name: EME M-9 SWD

Work Order #: 287834

Project ID:

Lab Batch #: 702535

Sample: 702535-1-BKS

Matrix: Water

Date Analyzed: 08/17/2007

Date Prepared: 08/17/2007

Analyst: WRU

Reporting Units: mg/L

Batch #: 1

## BLANK /BLANK SPIKE RECOVERY STUDY

| Alkalinity by EPA 310.1                   | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|-------------------------------------------|------------------|-----------------|------------------------|--------------------|-------------------|-------|
| Analytes                                  |                  |                 |                        |                    |                   |       |
| Alkalinity, Total (as CaCO <sub>3</sub> ) | ND               | 200             | 172                    | 86                 | 80-120            |       |

Lab Batch #: 702457

Sample: 498280-1-BKS

Matrix: Water

Date Analyzed: 08/16/2007

Date Prepared: 08/15/2007

Analyst: CELKEE

Reporting Units: mg/L

Batch #: 1

## BLANK /BLANK SPIKE RECOVERY STUDY

| BTEX by EPA 8021B | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|-------------------|------------------|-----------------|------------------------|--------------------|-------------------|-------|
| Analytes          |                  |                 |                        |                    |                   |       |
| Benzene           | ND               | 0.0500          | 0.0472                 | 94                 | 70-125            |       |
| Toluene           | ND               | 0.0500          | 0.0481                 | 96                 | 70-125            |       |
| Ethylbenzene      | ND               | 0.0500          | 0.0508                 | 102                | 71-129            |       |
| m,p-Xylene        | ND               | 0.1000          | 0.0885                 | 89                 | 70-131            |       |
| o-Xylene          | ND               | 0.0500          | 0.0484                 | 97                 | 71-133            |       |

Lab Batch #: 702738

Sample: 702738-1-BKS

Matrix: Water

Date Analyzed: 08/21/2007

Date Prepared: 08/21/2007

Analyst: MAB

Reporting Units: mg/L

Batch #: 1

## BLANK /BLANK SPIKE RECOVERY STUDY

| Inorganic Anions by EPA 300 | Blank Result [A] | Spike Added [B] | Blank Spike Result [C] | Blank Spike %R [D] | Control Limits %R | Flags |
|-----------------------------|------------------|-----------------|------------------------|--------------------|-------------------|-------|
| Analytes                    |                  |                 |                        |                    |                   |       |
| Chloride                    | ND               | 5.00            | 4.92                   | 98                 | 90-110            |       |
| Sulfate                     | ND               | 5.00            | 5.41                   | 108                | 90-110            |       |

Blank Spike Recovery [D] =  $100 \times [C]/[B]$

All results are based on MDL and validated for QC purposes.

Project Name: EME M-9 SWD

Work Order #: 287834

Lab Batch ID: 702457

Date Analyzed: 08/16/2007

Reporting Units: mg/L

Project ID:

QC- Sample ID: 287724-006 S Batch #: 1 Matrix: Water

Date Prepared: 08/15/2007 Analyst: CELKEE

| MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY |                   |  |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
|------------------------------------------------------|-------------------|--|--------------------------|-----------------|--------------------------|----------------------|-----------------|------------------------------------|--------------------|-------|-------------------|---------------------|------|
| Reporting Units: mg/L                                | BTEX by EPA 8021B |  | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|                                                      | Analytes          |  |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
|                                                      | Benzene           |  | 0.0135                   | 0.0500          | 0.0533                   | 80                   | 0.0500          | 0.0572                             | 87                 | 8     | 70-125            | 25                  |      |
|                                                      | Toluene           |  | 0.0202                   | 0.0500          | 0.0561                   | 72                   | 0.0500          | 0.0609                             | 81                 | 12    | 70-125            | 25                  |      |
|                                                      | Ethylbenzene      |  | ND                       | 0.0500          | 0.0506                   | 101                  | 0.0500          | 0.0518                             | 104                | 3     | 71-129            | 25                  |      |
|                                                      | m,p-Xylene        |  | 0.0122                   | 0.1000          | 0.0964                   | 84                   | 0.1000          | 0.0980                             | 86                 | 2     | 70-131            | 25                  |      |
|                                                      | o-Xylene          |  | 0.0081                   | 0.0500          | 0.0545                   | 93                   | 0.0500          | 0.0561                             | 96                 | 3     | 71-133            | 25                  |      |

Lab Batch ID: 702738

Date Analyzed: 08/21/2007

Reporting Units: mg/L

QC- Sample ID: 288157-001 S Batch #: 1 Matrix: Water

Date Prepared: 08/21/2007 Analyst: MAB

| Reporting Units: mg/L                                |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
|------------------------------------------------------|--------------------------|-----------------|--------------------------|----------------------|-----------------|------------------------------------|--------------------|-------|-------------------|---------------------|------|
| MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
| Inorganic Anions by EPA 300<br><br>Analytes          | Parent Sample Result [A] | Spike Added [B] | Spiked Sample Result [C] | Spiked Sample %R [D] | Spike Added [E] | Duplicate Spiked Sample Result [F] | Spiked Dup. %R [G] | RPD % | Control Limits %R | Control Limits %RPD | Flag |
|                                                      |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
|                                                      |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
|                                                      |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
|                                                      |                          |                 |                          |                      |                 |                                    |                    |       |                   |                     |      |
| Chloride                                             | 271                      | 25.0            | 288                      | 68                   | 25.0            | 287                                | 64                 | 6     | 90-110            | 20                  | X    |
| Sulfate                                              | 635                      | 25.0            | 646                      | 44                   | 25.0            | 639                                | 16                 | 93    | 90-110            | 20                  | XF   |

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
Relative Percent Difference  $RPD = 200 \times (D-G)/(D+G)$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, I = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable, N = See Narrative, EQL = Estimated Quantitation Limit



## Sample Duplicate Recovery



Project Name: EME M-9 SWD

Work Order #: 287834

Lab Batch #: 702535

Date Analyzed: 08/17/2007

QC-Sample ID: 287834 D

Reporting Units: mg/L

Project ID:

Date Prepared: 08/17/2007

Analyst: WRU

Batch #: 1

Matrix: Water

| SAMPLE / SAMPLE DUPLICATE RECOVERY        |                          |                             |     |                     |      |
|-------------------------------------------|--------------------------|-----------------------------|-----|---------------------|------|
| Alkalinity by EPA 310.1                   | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Analyte                                   |                          |                             |     |                     |      |
| Alkalinity, Total (as CaCO <sub>3</sub> ) | 316                      | 316                         | NC  | 20                  |      |

Lab Batch #: 702738

Date Analyzed: 08/21/2007

QC-Sample ID: 288157-001 D

Reporting Units: mg/L

Date Prepared: 08/21/2007

Analyst: MAB

Batch #: 1

Matrix: Water

| SAMPLE / SAMPLE DUPLICATE RECOVERY |                          |                             |     |                     |      |
|------------------------------------|--------------------------|-----------------------------|-----|---------------------|------|
| Inorganic Anions by EPA 300        | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Analyte                            |                          |                             |     |                     |      |
| Chloride                           | 271                      | 267                         | 1   | 20                  |      |
| Sulfate                            | 635                      | 632                         | 0   | 20                  |      |

Lab Batch #: 702294

Date Analyzed: 08/15/2007

QC-Sample ID: 287614-001 D

Reporting Units: mg/L

Date Prepared: 08/15/2007

Analyst: LATCOR

Batch #: 1

Matrix: Water

| SAMPLE / SAMPLE DUPLICATE RECOVERY |                          |                             |     |                     |      |
|------------------------------------|--------------------------|-----------------------------|-----|---------------------|------|
| Metals per ICP by SW846 6010B      | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Analyte                            |                          |                             |     |                     |      |
| Calcium                            | 63.1                     | 62.5                        | 1   | 25                  |      |
| Magnesium                          | 12.3                     | 12.7                        | 3   | 25                  |      |
| Potassium                          | 2.13                     | 2.10                        | 1   | 25                  |      |
| Sodium                             | 148                      | 146                         | 1   | 25                  |      |

Lab Batch #: 702313

Date Analyzed: 08/15/2007

QC-Sample ID: 287855-001 D

Reporting Units: mg/L

Date Prepared: 08/15/2007

Analyst: IRO

Batch #: 1

Matrix: Water

| SAMPLE / SAMPLE DUPLICATE RECOVERY     |                          |                             |     |                     |      |
|----------------------------------------|--------------------------|-----------------------------|-----|---------------------|------|
| Residue, Filterable (TDS) by EPA 160.1 | Parent Sample Result [A] | Sample Duplicate Result [B] | RPD | Control Limits %RPD | Flag |
| Analyte                                |                          |                             |     |                     |      |
| Total dissolved solids                 | 1750                     | 1740                        | 1   | 30                  |      |

Spike Relative Difference RPD  $200 * |(B-A)/(B+A)|$   
All Results are based on MDL and validated for QC purposes.

**Environmental Lab of Texas**  
Variance/ Corrective Action Report- Sample Log-In

Client: Pice  
Date/ Time: 8-13-07 4:33  
Lab ID #: 287834  
Initials: GL

**Sample Receipt Checklist**

|                                                            |                                         |                             |                          | Client Initials |
|------------------------------------------------------------|-----------------------------------------|-----------------------------|--------------------------|-----------------|
| #1 Temperature of container/ cooler?                       | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <u>10</u> °C             |                 |
| #2 Shipping container in good condition?                   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #3 Custody Seals intact on shipping container/ cooler?     | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Not Present              |                 |
| #4 Custody Seals intact on sample bottles/ container?      | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Not Present              |                 |
| #5 Chain of Custody present?                               | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #6 Sample instructions complete of Chain of Custody?       | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #7 Chain of Custody signed when relinquished/ received?    | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #8 Chain of Custody agrees with sample label(s)?           | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | ID written on Cont / Lid |                 |
| #9 Container label(s) legible and intact?                  | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Not Applicable           |                 |
| #10 Sample matrix/ properties agree with Chain of Custody? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #11 Containers supplied by ELOT?                           | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #12 Samples in proper container/ bottle?                   | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | See Below                |                 |
| #13 Samples properly preserved?                            | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | See Below                |                 |
| #14 Sample bottles intact?                                 | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #15 Preservations documented on Chain of Custody?          | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #16 Containers documented on Chain of Custody?             | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |                          |                 |
| #17 Sufficient sample amount for indicated test(s)?        | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | See Below                |                 |
| #18 All samples received within sufficient hold time?      | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | See Below                |                 |
| #19 Subcontract of sample(s)?                              | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Not Applicable           |                 |
| #20 VOC samples have zero headspace?                       | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | Not Applicable           |                 |

**Variance Documentation**

Contact: \_\_\_\_\_ Contacted by: \_\_\_\_\_ Date/ Time: \_\_\_\_\_

Regarding: \_\_\_\_\_

Corrective Action Taken: \_\_\_\_\_

- Check all that Apply:
- ☐ See attached e-mail/ fax
  - ☐ Client understands and would like to proceed with analysis
  - ☐ Cooling process had begun shortly after sampling event

# Environmental Lab of Texas

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

12600 West I-30 East  
Odessa, Texas 79766  
Phone: 432-563-1800  
Fax: 432-563-1733

Project Manager: Kristin Farris Pope kpope@riceswd.com

Company Name

RICE Operating Company

Company Address:

122 W. Taylor Street

City/State/Zip:

Hobbs, New Mexico 88240

Telephone No:

(505) 393-9174

Fax No:

(505) 397-1471

Report Format:

☒ Standard ☐ TRRP ☐ NPDES

Sampler Signature:

Rozanne Johnson (505) 331-9310

e-mail:

rozanne@valmet.com

ORDER #: 287834

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| LAB # (Lab use only) |  | FIELD CODE |  | Beginning Depth | Ending Depth | Date Sampled | Time Sampled | Field Printed | Preservation & # of Containers |  |  |  |  |  |  |  |  |  | Matrix |  |  |  |  |  |  |  |  |  | Analyze For: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                      |  |            |  |                 |              |              |              |               |                                |  |  |  |  |  |  |  |  |  |        |  |  |  |  |  |  |  |  |  |              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Special Instructions: Please email to: kpope@riceswd.com rozanne@valmet.com

Received by: Rozanne Johnson Date: 8-13-07 Time: 13:05

Received by: Davidson Date: 8-13-07 Time: 4:30

Received by: Bill Korman Date: 8/19/07 Time: 16:33

Temperature Upon Receipt: 10.0 °C

Laboratory Comments: Sample Containers intact? Y VOCs Free of Headspace? Y Labels on container(s) Y Custody seals on container(s) Y Sample Hand Delivered Y by Courier? Y by Sample/Client Rep? Y by FedEx? Y by UPS? Y by Other? Y



PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR  
RICE OPERATING COMPANY  
ATTN: KRISTIN FARRIS-POPE  
122 W. TAYLOR STREET  
HOBBS, NM 88240  
FAX TO: (575) 397-1471

Receiving Date: 10/25/07  
Reporting Date: 11/01/07  
Project Number: NOT GIVEN  
Project Name: EME M-9 SWD  
Project Location: T20S-R37E-SEC9 M-LEA COUNTY, NM

Sampling Date: 10/22/07  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: SB  
Analyzed By: HMKS

| LAB NUMBER                  | SAMPLE ID        | Na<br>(mg/L) | Ca<br>(mg/L) | Mg<br>(mg/L) | K<br>(mg/L) | Conductivity<br>( $\mu$ S/cm) | T-Alkalinity<br>(mgCaCO <sub>3</sub> /L) |
|-----------------------------|------------------|--------------|--------------|--------------|-------------|-------------------------------|------------------------------------------|
| ANALYSIS DATE:              |                  | 11/01/07     | 10/31/07     | 10/31/07     | 10/30/07    | 10/29/07                      | 10/29/07                                 |
| H13585-1                    | MONITOR WELL #1A | 328          | 122          | 58.1         | 3.78        | 2,570                         | 240                                      |
| H13585-2                    | MONITOR WELL #2  | 420          | 137          | 65.3         | 12.2        | 3,050                         | 324                                      |
| H13585-3                    | MONITOR WELL #3  | 450          | 146          | 66.2         | 5.05        | 3,010                         | 288                                      |
| H13585-4                    | MONITOR WELL #4  | 623          | 206          | 125          | 10.3        | 4,370                         | 272                                      |
| H13585-5                    | MONITOR WELL #5  | 604          | 183          | 105          | 10.5        | 4,550                         | 264                                      |
| H13585-6                    | WATER WELL       | 516          | 110          | 63.7         | 6.48        | 3,130                         | 256                                      |
| Quality Control             |                  | NR           | 49.2         | 51.6         | 2.73        | 1,396                         | NR                                       |
| True Value QC               |                  | NR           | 50.0         | 50.0         | 3.00        | 1,404                         | NR                                       |
| % Recovery                  |                  | NR           | 98.4         | 103          | 91.0        | 99.4                          | NR                                       |
| Relative Percent Difference |                  | NR           | < 0.1        | < 0.1        | 6.7         | 0.7                           | NR                                       |

|          |             |           |      |       |       |
|----------|-------------|-----------|------|-------|-------|
| METHODS: | SM3500-Ca-D | 3500-Mg E | 8049 | 120.1 | 310.1 |
|----------|-------------|-----------|------|-------|-------|

|                               | Cl <sup>-</sup><br>(mg/L) | SO <sub>4</sub><br>(mg/L) | CO <sub>3</sub><br>(mg/L) | HCO <sub>3</sub><br>(mg/L) | pH<br>(s.u.) | TDS<br>(mg/L) |
|-------------------------------|---------------------------|---------------------------|---------------------------|----------------------------|--------------|---------------|
| ANALYSIS DATE:                | 11/01/07                  | 10/31/07                  | 10/29/07                  | 10/29/07                   | 10/29/07     | 10/26/07      |
| H13585-1     MONITOR WELL #1A | 336                       | 526                       | 0                         | 293                        | 7.45         | 1,814         |
| H13585-2     MONITOR WELL #2  | 500                       | 491                       | 0                         | 395                        | 7.63         | 2,045         |
| H13585-3     MONITOR WELL #3  | 400                       | 740                       | 0                         | 351                        | 7.66         | 2,150         |
| H13585-4     MONITOR WELL #4  | 840                       | 905                       | 0                         | 332                        | 7.92         | 3,069         |
| H13585-5     MONITOR WELL #5  | 1,150                     | 320                       | 0                         | 322                        | 7.82         | 2,809         |
| H13585-6     WATER WELL       | 556                       | 603                       | 0                         | 312                        | 7.84         | 1,988         |
|                               |                           |                           |                           |                            |              |               |
| Quality Control               | 500                       | 23.5                      | NR                        | 1000                       | 6.99         | NR            |
| True Value QC                 | 500                       | 25.0                      | NR                        | 1000                       | 7.00         | NR            |
| % Recovery                    | 100                       | 93.9                      | NR                        | 100                        | 99.9         | NR            |
| Relative Percent Difference   | < 0.1                     | 12.5                      | NR                        | 1.2                        | 0.3          | NR            |

|          |             |       |       |       |       |       |
|----------|-------------|-------|-------|-------|-------|-------|
| METHODS: | SM4500-Cl-B | 375.4 | 310.1 | 310.1 | 150.1 | 160.1 |
|----------|-------------|-------|-------|-------|-------|-------|

*Kristin Supplet*  
Chemist

*11/01/07*  
Date

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# ARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR  
RICE OPERATING COMPANY  
ATTN: KRISTIN FARRIS-POPE  
122 WEST TAYLOR  
HOBBS, NM 88240  
FAX TO: (575) 397-1471

Receiving Date: 10/25/07  
Reporting Date: 11/13/07  
Project Number: NOT GIVEN  
Project Name: EME M-9 SWD  
Project Location: T20S R37E SEC9 M - LEA COUNTY, NM

Sampling Date: 10/22/07  
Sample Type: WATER  
Sample Condition: COOL & INTACT  
Sample Received By: SB  
Analyzed By: CK

| LAB NUMBER                  | SAMPLE ID       | BENZENE<br>(mg/L) | TOLUENE<br>(mg/L) | ETHYL<br>BENZENE<br>(mg/L) | TOTAL<br>XYLENES<br>(mg/L) |
|-----------------------------|-----------------|-------------------|-------------------|----------------------------|----------------------------|
| ANALYSIS DATE               |                 | 10/26/07          | 10/26/07          | 10/26/07                   | 10/26/07                   |
| H13585-5                    | MONITOR WELL #5 | <0.001            | <0.001            | <0.001                     | <0.003                     |
|                             |                 |                   |                   |                            |                            |
|                             |                 |                   |                   |                            |                            |
|                             |                 |                   |                   |                            |                            |
|                             |                 |                   |                   |                            |                            |
|                             |                 |                   |                   |                            |                            |
|                             |                 |                   |                   |                            |                            |
| Quality Control             |                 | 0.110             | 0.100             | 0.100                      | 0.332                      |
| True Value QC               |                 | 0.100             | 0.100             | 0.100                      | 0.300                      |
| % Recovery                  |                 | 110               | 100               | 100                        | 102                        |
| Relative Percent Difference |                 | 2.4               | 1.7               | 1.7                        | 2.1                        |

METHOD: EPA SW-846 8021B

Chemist

Date

H13585b Rice

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# WELL SAMPLING DATA FORM

CLIENT: RICE Operating Company WELL ID: Monitor Well #1A  
 SYSTEM: EME DATE: March 5, 2007  
 SITE LOCATION: M-9 SWD SAMPLER: Rozanne Johnson

PURGING METHOD: ☐ Hand Bailed ☒ Pump, Type: Purge Pump  
 SAMPLING METHOD: ☒ Disposable Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DISPOSAL METHOD OF PURGE WATER: ☐ On-site Drum ☐ Drums ☒ SWD Disposal Facility

TOTAL DEPTH OF WELL: 28.43 Feet  
 DEPTH TO WATER: 16.24 Feet  
 HEIGHT OF WATER COLUMN: 12.19 Feet  
 WELL VOLUME: 2.0 Gal. 2 In. Well Diameter  
7 Gallons purged prior to sampling

| TIME  | TEMP.<br>°C | COND.<br>mS/cm | pH   | PHYSICAL APPEARANCE AND REMARKS   |
|-------|-------------|----------------|------|-----------------------------------|
|       |             |                |      |                                   |
| 12:50 | 20.2        | 2.59           | 7.21 | Clear to Light Gray / Strong Odor |
|       |             |                |      | Samples Collected                 |
|       |             |                |      | Major Ions/TDS (1-1000ml Plastic) |
|       |             |                |      |                                   |
|       |             |                |      |                                   |
|       |             |                |      |                                   |
|       |             |                |      |                                   |

COMMENTS:  
Myron Model 6P instrument used to obtain pH, conductivity, and temperature measurements.  
Delivered samples to Environmental Lab of Texas for Major Ions and TDS analysis.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

# Cardinal Laboratories, Inc.

101 East Marland - Hobbs, New  
Mexico 88240  
Tel (505) 393-2326  
Fax (505) 393-2476

|                                               |                                        |                  |                                               |                     |
|-----------------------------------------------|----------------------------------------|------------------|-----------------------------------------------|---------------------|
| Company Name:                                 | RICE Operating Company                 | BILL TO Company: | RICE Operating Company                        | PO#:                |
| Project Manager:                              | Kristin Fairis-Pope, Project Scientist | Address:         | 122 W Taylor Street ~ Hobbs, New Mexico 88240 | (Street, City, Zip) |
| Address:                                      | (Street, City, Zip)                    | Phone#:          | (505) 393-9174                                | Fax#:               |
| 122 W Taylor Street ~ Hobbs, New Mexico 88240 |                                        |                  |                                               | (505)397-1471       |
| Phone #:                                      | (505) 393-9174                         | Fax #:           | (505) 397-1471                                |                     |

|                                            |               |                                                                                    |                                                       |
|--------------------------------------------|---------------|------------------------------------------------------------------------------------|-------------------------------------------------------|
| Project #:                                 | Project Name: | Sample Signature:                                                                  | Sample ID:                                            |
| T20S-R37E-Sec9 M ~ Lea County - New Mexico | EME M-9 SWD   |  | Rozanne Johnson (505)831-8310<br>rozanne@valornet.com |

Sample Signature: Rozanne Johnson (505) 631-9310  
rozanne@valonnet.com

[illegible]

|                                                                                                      |                |            |              |  |  |       |       |                        |     |    |
|------------------------------------------------------------------------------------------------------|----------------|------------|--------------|--|--|-------|-------|------------------------|-----|----|
| Relinquished by:  | Date: 10-23-07 | Time: 5:00 | Received by: |  |  | Date: | Time: | Phone Results:         | Yes | No |
| Rozanne Wilson                                                                                       |                |            |              |  |  |       |       | Fax Results:           | Yes | No |
|                                                                                                      |                |            |              |  |  |       |       | Additional Fax Number: |     |    |

|                                 |                  |             |                                 |          |        |                                                                   |
|---------------------------------|------------------|-------------|---------------------------------|----------|--------|-------------------------------------------------------------------|
| Relinquished by:                | Date:            | Time:       | Received By: (Laboratory Staff) | Date:    | Time:  | REMARKS:                                                          |
|                                 |                  |             | Sue Cairns                      | 10/25/07 | 5:00pm | Email Results to:<br>kpoope@riceswd.com<br>weinheimer@riceswd.com |
| Relinquished By: (Client/Owner) | Sample Condition | CHECKED BY: |                                 |          |        |                                                                   |

Delivered By: (Circle One) UPS - Bus - Other: UPS

Sample Condition

| Yes                                 | Cool                                | Intact                              |
|-------------------------------------|-------------------------------------|-------------------------------------|
| <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <input type="checkbox"/>            | <input type="checkbox"/>            | <input type="checkbox"/>            |

CHECKED BY: lweinheimer@riceswd.com  
rozanne@valornet.com

(Initials) lwe

### WELL SAMPLING DATA FORM

CLIENT: RICE Operating Company WELL ID: Monitor Well #1A  
SYSTEM: EME DATE: August 9, 2007  
SITE LOCATION: M-9 SWD SAMPLER: Rozanne Johnson

PURGING METHOD: ☐ Hand Bailed ☒ Pump, Type: Purge Pump  
SAMPLING METHOD: ☒ Disposable Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DISPOSAL METHOD OF PURGE WATER: ☐ On-site Drum ☐ Drums ☒ SWD Disposal Facility

TOTAL DEPTH OF WELL: 28.43 Feet  
DEPTH TO WATER: 16.63 Feet  
HEIGHT OF WATER COLUMN: 11.80 Feet  
WELL VOLUME: 1.9 Gal. 2 In. Well Diameter  
8 Gallons purged prior to sampling

| TIME  | TEMP.<br>°C | COND.<br>mS/cm | pH   | PHYSICAL APPEARANCE AND REMARKS   |
|-------|-------------|----------------|------|-----------------------------------|
| 11:35 | 20.6        | 2.69           | 7.22 | Clear to Light Gray / Strong Odor |
|       |             |                |      | Samples Collected                 |
|       |             |                |      | Major Ions/TDS (1-1000ml Plastic) |
|       |             |                |      |                                   |
|       |             |                |      |                                   |
|       |             |                |      |                                   |
|       |             |                |      |                                   |

#### COMMENTS:

Myron Model 6P instrument used to obtain pH, conductivity, and temperature measurements.

Delivered samples to Environmental Lab of Texas for Major Ions and TDS analysis.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# WELL SAMPLING DATA FORM

CLIENT: RICE Operating Company WELL ID: Monitor Well #1A  
 SYSTEM: EME DATE: June 1, 2007  
 SITE LOCATION: M-9 SWD SAMPLER: Rozanne Johnson

PURGING METHOD: ☐ Hand Bailed ☒ Pump, Type: Purge Pump  
 SAMPLING METHOD: ☒ Disposable Bailer ☐ Direct from Discharge Hose ☐ Other: \_\_\_\_\_

DISPOSAL METHOD OF PURGE WATER: ☐ On-site Drum ☐ Drums ☒ SWD Disposal Facility

TOTAL DEPTH OF WELL: 28.43 Feet  
 DEPTH TO WATER: 15.75 Feet  
 HEIGHT OF WATER COLUMN: 12.68 Feet  
 WELL VOLUME: 2.0 Gal. 2 In. Well Diameter  
8 Gallons purged prior to sampling

| TIME  | TEMP.<br>°C | COND.<br>mS/cm | pH   | PHYSICAL APPEARANCE AND REMARKS   |
|-------|-------------|----------------|------|-----------------------------------|
|       |             |                |      |                                   |
| 12:45 | 20.1        | 2.56           | 7.20 | Clear to Light Gray / Strong Odor |
|       |             |                |      | Samples Collected                 |
|       |             |                |      | Major Ions/TDS (1-1000ml Plastic) |
|       |             |                |      |                                   |
|       |             |                |      |                                   |
|       |             |                |      |                                   |
|       |             |                |      |                                   |

COMMENTS:  
Myron Model 6P instrument used to obtain pH, conductivity, and temperature measurements.  
Delivered samples to Environmental Lab of Texas for Major Ions and TDS analysis.  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_